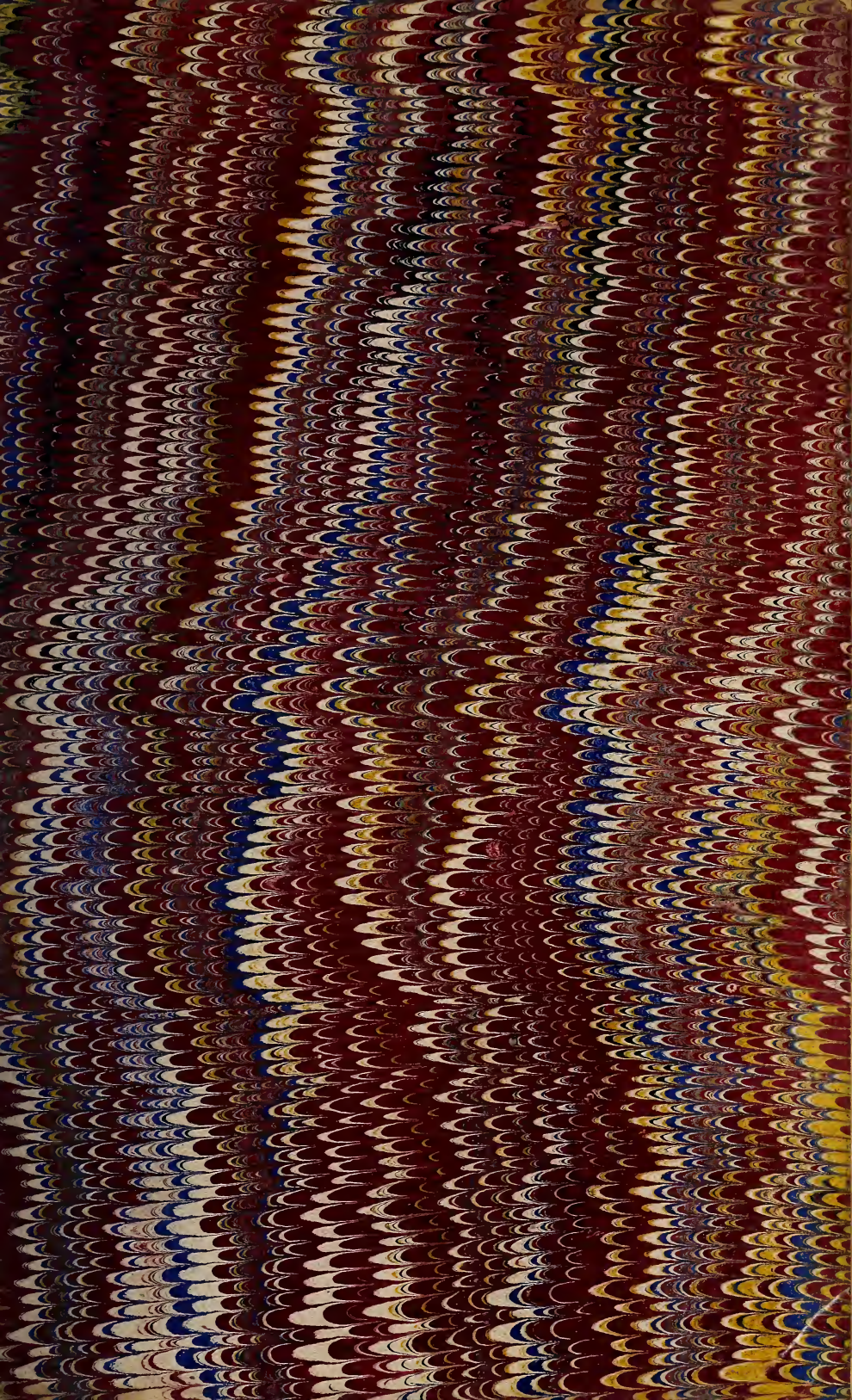

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PREFACE.

The publication of the "Library of Reason" was the result of an idea which occurred to me during the period that I was engaged in conducting the "Oracle of Reason," and was intended as a Monthly Supplement to that work. As stated at the head of No. 1, the "Library of Reason" was to "consist of re-prints of rare and valuable works, which were either out of print or too expensive for the general reader." This purpose, with one or two exceptions, was carried out. Had the "Library of Reason" succeeded as its promoters thought it would, I have no doubt but many volumes of Literary Gems would have been given to the public in a cheap and popular form. It met the fate, however, of most modern liberal publications—it never paid one-half of the cost of its production.

I should be wanting in justice to a gentleman of liberal mind and generous feeling, if I were to omit to state that the "Library of Reason" would never have appeared, had not W. J. B., who for so long defrayed the loss incurred by the publication of the "Oracle of Reason," immediately upon my proposing the advisability of publishing the "Library," generously offered to bear one-half the cost, if the printer would incur the other. This arrangement was maintained for the early numbers, after which period they appeared at the entire cost of Mr. Hetherington, whose loss must consequently, have been very heavy.

W. Chilton.

☞ An Index and Title is now supplied, so that the Volume is complete.

CONTENTS.

THE LIBRARY OF REASON.

The Library of Reason *is published by the proprietors of the* ORACLE OF REASON—*which paper, it is well known, has for its objects the demonstration of the reasonableness and utility of Atheism, and the folly and wickedness of Religion. Its aim is to eradicate the effeminacy of piety, and cultivate the manly independence of virtue—to show the completeness of morality for promoting happiness, and the sufficiency of reason as the guide of human conduct. In this path the* Library of Reason *will tread, and these desirable ends its pages will be calculated to achieve. The* Library of Reason *will consist of re-prints of* RARE *and* VALUABLE WORKS, *which are either* OUT OF PRINT *or* TOO EXPENSIVE *for the general reader. Nothing need be said respecting the* CHEAPNESS *and* IMPORTANCE *of the work—it speaks for itself.*

No. I. PUBLISHED MONTHLY. ONE PENNY.

ΔΕΙΔΑΙΜΟΝΙΑ.

ESSAY ON SUPERSTITION.

BY PLUTARCHUS.

(*Translated by Julian Hibbert.*)

I. IGNORANCE and uninstructedness concerning the gods may be compared to a river divided into two streams; one of which, as in stubborn soils (that is, refractory minds), produceth atheism; and the other of which, as in marshy soils (that is, soft and flexible minds), produceth superstition. Now every false judgment, even when in other cases than these, is nevertheless pernicious; but it is still more pernicious, when it is connected with some passion. For every passion seemeth to be an enflamed error; and, as dislocations of the limbs are more dangerous when at the same time there is a wound, so also mental errors are more dangerous when attended by any passion.

Doth a person imagine, that the universe hath its origin only in atoms and a vacuum? The conjecture is false; but it inflicteth no wound, no palpitation, no tormenting sorrow. But, doth any one conjecture that money is the summum bonum? This falsity is, as it were, poisonous, it preyeth upon the mind, alienateth it, preventeth it from sleeping, filleth it with fury, debaseth it, stifleth it, enslaveth it.

Again: do some persons imagine that virtue and vice are substances? Such an error is perhaps disgraceful, but it is not such a one as we should lament and deplore. But what are those judgments and conjectures, which excite a man to say:

> Oh virtue, thou art but a name,
> Yet I did long believe in thine existence,

and have quitted for thee injustice which might have enriched me, and intemperance which produceth every pleasure? We cannot but lament and even feel angry with such opinions, because they produce many disorders and passions in the mind, which are like ulcers and worms to the body.

II. To apply these observations to the subject before us, I may remark, that atheism, being a false opinion that there is nothing perfectly blessed and immortal, seemeth, by its denial of the deity, to lead to a sort of apathy; and the consequence of not believing that there are gods, is, the not fearing them.

The word "deisidaimonia," or "superstition," implieth an impassioned thought, and conjecture full of fear, which humbleth and depresseth man; and maketh him suppose indeed that there are gods, but that they delight in causing grief and misery.

For the atheist appeareth to be unaffected towards the deity; while the superstitionist appeareth indeed to be affected, but only in a perverse manner. For ignorance produceth in the atheist, a disbelief that god is benevolent; and in the superstitionist, an opinion that god is cruel. Whence it followeth, that atheism is indeed a false opinion; but that superstition is an evil affection of the mind, originating in a false opinion.

III. Of a truth, all the disorders and passions of the mind are disgraceful; yet, in some, there is a sort of levity which produceth boldness, sublimity, and high-mindedness. It may also be said that there is no passion that is deficient in an impulsive principle. And, indeed, it is an accusation that may be brought against all the passions, that being urged on by active forces, they oppress and exhaust reason. Fear alone, being as devoid of boldness as of reason, maketh that which is irrational in us idle, stupid, and perplexed; whence it is called by the Greeks "deima" (terror), because it bindeth, and "tarbos" (fear), because it disturbeth the mind. And there is no sort of fear so fatal to occupation, and so productive of perplexity, as superstition. He that remaineth on dry land, feareth not the storm; he that goeth not to the war, feareth not the battle; and he that leaveth not his house, feareth not the highwaymen. Neither doth the poor individual fear flattery, nor the humble individual fear envy. The Gaul feareth not earthquakes, nor the Ethopian thunderbolts. But he that feareth gods,

feareth all these things—earth, sea, air, heaven, darkness, light, noise, silence, dreams.

In sleep, the slave forgetteth his master, the captive feeleth not the weight of his fetters, and the sick man experienceth a mitigation even of inflamed wounds, and of cruel and excruciating ulcers.

> O sleep, thou balmy soother of disease,
> How opportunely thou hast come to me !

But the superstitionist is incapable of saying this. For superstition alone maketh no truce with sleep; nor doth she, now and then, permit the mind to reject its bitter and oppressive thoughts about god, and consequently to respire and take courage. But, as it were in the shades below, she exciteth, against the sleep of the superstitious, frightful images, and monstrous visions, and certain unknown punishments; and thus agitateth the wretched soul with dreams, that drive away real repose: for superstition maketh the soul to be beaten and buffetted by itself, as if by another person, and forceth it to receive oppressive and absurd directions. Moreover, when superstitious men awake, they do not despise or ridicule their dreams, nor do they perceive that what tormented them had no real existence; but, fleeing from the shadow of a harmless deceit, they deceive their imaginations, even when broad awake, till they completely exhaust and torment themselves. They even fall into the hands of jugglers and impostors, who say:

> If some nocturnal phantasm doth affright thee;
> Or if, from the terrestrial Hecat,
> Thou hast a visit been receiving;

then send for some old woman to perform expiations, and dip thyself in the sea, and sit for some hours on the ground.

> Alas, that Grecians should adopt
> Vile customs, fitted only for barbarians !

It is owing to superstition that men roll themselves in the dirt, thrust themselves into dunghills, observe sabbaths, throw themselves on their faces, seat themselves before the temples, and practise absurd prostrations.

Those who imagined that they kept up the genuine art of music, directed the players on the harp to sing with an even mouth. And we also recommend religious people to pray to the gods with a composed and regular countenance; and, while we are examining whether the tongue upon the entrails of the victim is pure and straight, we should not roll about and distort our own tongues, by pronouncing absurd names and barbarous phrases, disgracing and perverting the divine religion established on the authority of our forefathers.

But the comic writer hath not inelegantly said, against those who ornament couches with gold and silver: "Why dost thou make sleep expensive? whereas sleep is the only blessing which the gods bestow upon us gratuitously." Similarly we may say to the superstitionist: "Why dost thou make sleep a perpetual torment and pain? whereas sleep is bestowed upon us by the gods, that, when our wretched souls can have recourse to no other comforter, our cares may cease and be forgotten."

Heraclitus saith, that "those who are awake enjoy one world in common, but that those who sleep inhabit each of them a separate world." But the superstitious man hath no world in common with other men: for, when awake, he doth not enjoy his right senses, and, when asleep, he is not liberated from the dream which tormenteth him; but, while the principle of reason is torpid, the principle of fear is ever active, and there is no fleeing from it and no removal.

IV. The tyrant Polycrates was feared at Samos, and so was Periander at Corinth; but they were feared by no one who had removed into a state where freedom and democracy were established. But whither can he escape who looketh upon the government of the gods as a morose and inexorable tyranny? What land or what sea shall he find, that hath not its god? Wretched being! Into what part of the universe wilt thou go down and hide thyself, in the belief that thou wilt have escaped the deity?

Slaves, who have renounced freedom, are entitled, by law, to demand a sale, and can thus obtain a milder master; but superstition will not allow a change of gods; nor can a god that shall not occasion terror be found by any one, who feareth paternal and genethliacal deities, and who dreadeth the gods, called saviours, and those called propitious: for he regardeth with fear and trembling those beings of whom we ask wealth, plenty, concord, peace, and the direction of our words and actions.

Again: slaves consider their slavery a misfortune, and say:

> How dreadful a calamity it is
> For man or woman to become a slave,
> And be subservient to ill-tempered masters.

But, how much more severely they suffer who are subservient to masters that cannot be fled from, that cannot be avoided, that cannot be removed!

An altar is a refuge for a slave; even for robbers many of the temples are sanctuaries; and those who flee from the enemy take courage if they can clasp hold of an image or shrine. But these very things, in which those who fear the greatest dangers place their confidence, are objects of dread, fear, and alarm to the superstitionist. Drag not away the superstitious man from the temples,

for it is there that he is punished and tormented.

But I will come to another argument. Death, which is to all men the termination of life, is not the termination of superstition. She passeth over the limits of existence, prolonging fear beyond life, and joining to death the consideration of eternal misery, and imagining that when transitory affairs are terminated, interminable ones begin!

Therefore are certain vast gates of Hades opened, and rivers are spread out with waves of fire and of hatred, and a darkness full of phantasms is brought on, and ghosts with horrible countenances and screeching voices; and there are judges too, and executioners, and chains, and dens groaning with infinite tortures. Thus hath wretched superstition rendered for herself, by anticipation, that very period inevitable, which she avoideth by ceasing to suffer!

V. There are none of those miseries in atheism. Yet, certainly, ignorance is blameable; and the overlooking and shutting one's eyes upon matters of such importance, is a great calamity for the soul, which is extinguished as regardeth the knowledge of god, as if towards what appeareth extremely clear and proper to most other eyes. But, in this opinion, namely, atheism, are there those perturbations, diseases, troubles, and servitudes, which I have above described as belonging to superstition?

Plato saith, that music, which is the maker of concord and agreement, was given by gods to men, not to tickle the ear and produce luxury, but that the motions and harmonies of the soul, when disturbed and wandering in the body, from the absence of the muses and the graces, might be recalled to their former consent and conformity.

Pindar saith:

> Those in whom Jove doth not delight,
> Are troubled when they hear the muses' voice.

For indeed they become angry and indignant at it. So, also, it is said, that tigers, when drums are beaten around them, will become so furious, as, at last, to tear each other to pieces. They therefore suffer less, who, through defect of hearing, or from absolute deafness, are insensible to music, and are, therefore, unmoved by it. Tiresias was very unfortunate in not being able to see his children or his friends; but Athamas and Agave were still more unfortunate, who took their children and friends for lions and deer. It would also have been better for Hercules, when he was distracted, if he could have neither seen his children nor have been aware of their presence, than that he should have treated as enemies those whom he loved so dearly.

VI. What then? Doth there not appear to thee a similar difference in the state of the atheist's mind, as compared with that of the superstitionist's? The former seeth not the gods at all; the latter believeth their existence, but at the same time their malevolence. The atheist, indeed, overlooketh them: but the superstitionist mistaketh their mildness for terror, their paternal affection for tyranny, their care for injuriousness, and their imperturbability for savageness and brutality.

Moreover, superstitionists suffer themselves to be persuaded by workmen in copper, stone, and wax, that the bodies of the gods are anthropomorphous; and, accordingly, they fabricate, ornament, and worship them as such; and they despise philosophers and statesmen, who describe the venerable nature of the deity, by giving him the attributes of goodness, magnanimity, mildness and protectiveness.

Atheists, therefore, neither perceive nor credit the excellent things which would be useful to them; and superstitionists change what would be useful to them into a cause of trouble and fear. And, in short, atheism is apathetical as regardeth the deity, and is incapable of perceiving the summum bonum; while superstition is polypathetical, and mistaketh the summum bonum for the summum malum. The superstitionist is afraid of the gods, yet hath recourse to the gods. He flattereth them, and yet reproacheth them. He prayeth to them, and yet accuseth them.

No mortal can be always happy. It is with reference only to the gods that Pindarus saith:

> They have no illness, no old age;
> No labour they endure;
> Nor are they obliged to pass
> The deeply-sounding Acheron.

But human passions and actions are liable to a multiplicity of uncertain accidents.

VII. Now, first in things not under the disposal of his volition, consider the atheist and observe his behaviour. If he is a man of a forbearing temper, he endureth the present events in silence, and endeavoureth to provide himself with assistance and consolation. But, if he is a man of fretful and impatient temper, he directeth all his complaints against chance and spontaniety; and declareth that nothing here below is directed by justice or providence, but that all things are hurried on and impelled in promiscuous confusion.

But this is not the custom of the superstitionist. However small may be that which hath happened, he abandoneth himself to sorrow, adding to his grief other oppressive and almost incurable passions, by presenting his fancy with terrors, fears, suspicions, and trepidations, and doing nothing without tears and groans. For he blameth neither man, nor fortune, nor the

seasons, nor himself, but he layeth all the blame upon his god, and saith, that from that quarter a spiritual flood of vengeance is let loose upon him. Moreover, he doth not consider himself as unfortunate, but as a poor mortal under divine displeasure, punished by the gods, and making satisfaction for his sins, and enduring all things deservedly.

The atheist, when ill, calculateth and calleth to his remembrance how often he hath eaten or drunken too much, what irregularities he hath made in his diet, whether he hath over exerted himself, or hath gone into an atmosphere contrary to his habits and his constitution. When again he maketh a mistake in political affairs, and either incurreth the displeasure of the mob, or is falsely accused before the head of the government, he seeketh for the cause of these things in himself, and in those around him, and saith:

What fault, or what omission have I made?

But by the superstitionist, every bodily infirmity, loss of wealth, death of children, vexations and disappointments in political affairs, are said to be divine inflictions, and spiritual chastisements. Wherefore he dareth not to assist himself, or to remove, or to cure, or to oppose his misfortunes, lest he might be thought to contend with his god, and to make resistance under correction. But, when in sickness, he refuseth the visits of the medical man; and, when in grief, he shutteth the door upon the philosopher who would console and encourage him. "Leave me," he saith, "I am a wicked man, and under the curse of heaven, hated both by gods and spirits."

When a man who believeth not that there is a god, endureth grief and distress, he can wipe away his tears, cut his hair, and change his garments. But how can one accost the superstitionist, or how can one assist him? He sitteth before his door, clothed in sackcloth, or wrapped round in dirty rags. Oftentimes also he rolleth himself naked in the mire, confessing certain sins and transgressions of his own, as having eaten or drunken something, or as having walked in some path which the spirit doth not permit. Even when he is at his best, and is affected only by a mild superstition, he sitteth at home, surrounded with frankincense and lotions, while the old women bring him whatever they meet with and hang it for a charm upon him, as if, to use the expression of Bion, he were but a peg.

VIII. It is said that Teribazus, when arrested by the Persians, drew his scymetar, and being a strong man, began to fight; but that when the Persians cried out and protested that they arrested him at the order of the king, he immediately threw down his sword, and stretched out his hands to be bound. Now is not the case before us precisely similar? Other men combat with their misfortunes, push through affairs, and contrive for themselves means of escaping from, and of preventing, what is unpleasant. But the superstitionist, of his own accord, and without any person's suggesting it, saith to himself: "Ah, wretch, thou sufferest these things, according to the foreknowledge, and at the command, of thy god." He thus throweth away all hope, abandoneth himself to despair, and shunneth, or affronteth the friends who would console him.

Superstitions render fatal many evils which are in themselves of very slight importance. Thus, we are told that the ancient Midas, when disheartened and distressed by certain dreams, suffered his mind to be so sadly affected that he killed himself by drinking bull's blood.

Similarly, Aristodemus, the king of the Messenians, having, during the war with the Lacedæmonians, heard dogs howling like wolves, and having also seen the herb agrôstis growing up around his paternal hearth, miracles that alarmed the diviners, was so disheartened and so disappointed in his hopes that he slew himself. And it would perhaps have been best for Nicias, the general of the Athenians to have been delivered of his superstition in the same way as Midas or Aristodemus, was, than to have remained in inaction during an eclipse of the moon, while he was invested by the enemy, and consequently be made a prisoner (with 40,000 men, who were slain, or taken), and so to die ingloriously. For there is nothing formidable in the interposition of the earth between the sun and moon, nor is it terrible that the earth's shadow should fall upon the moon at the time of the ——; but to fall into the darkness of superstition is really terrible, when it obfuscateth the reason, in circumstances when men have particular need of reason.

Mark, Glaucus, how the ocean is disturbed;
And how the cloud circleth the promontory,
Portending tempest.

As soon as the pilot perceiveth this, he doth indeed pray that he may escape, and invoketh the gods, the saviours—but while he prayeth, he draweth to the rudder, letteth down the main-yard,

And gathering in the sails,
Escapeth the dark sea's engulphing force.

Hesiodus ordereth the agriculturist, before ploughing and seed time, to pray to the terrestrial Jove and the chaste Ceres, but with his hand upon the plough-tail. Similarly, Homerus saith that Ajax, when about to engage in single combat with Hector, ordered the Greeks to pray for him to the gods, and that then, while they were praying, he

armed himself. So also Agamemnon, at the same time that he directed his combatants:

Sharpen your spears, and well fix on your shields;

then also asketh of Jove:

King Priam's palace may I overthrow.

For god is the hope of valour, not the excuse of cowardice. Albeit the Jews, sitting still, in unbleached clothes, because it was the sabbath, suffered the enemy to plant ladders and seize upon the walls, they themselves not rising, but remaining inactive, like fishes in a net, though fettered only by their superstition.

IX. Such then is superstition, in dangerous and undesirable times and circumstances. Nor even in more agreeable days, is superstition at all better than atheism. Surely, very agreeable to men are feasts and banquets in the temples, and initiations and orgies, and the praying and adoring the gods. Here, therefore, observe the atheist, how he derideth, with a wild and sardonic grin, these ceremonies; and occasionally whispereth aside to his fellow guests: "They who think that these ceremonies are performed to gods, are silly and be-devilled." And this erroneous judgment is the only evil that happeneth to the atheist. On the other hand, the superstitious man wisheth indeed to rejoice and be merry, but cannot.

With sacrifice the city teemeth;
But with pæans groans are mixed

in the soul of him who is superstitious. He turneth pale beneath his chaplet of flowers; he sacrificeth while in dread; he prayeth with a faultering tongue; and throweth the frankincense with trembling hands. He proveth, in short, the falsity of the saying of Pythagoras, that we are then best when we walk towards the gods. For indeed then do the superstitious feel themselves most miserable and wretched, approaching the palaces and the royal abodes of the gods, as they would the dens of bears, the pits of dragons, or the caves of crocodiles.

X. Hence, to me, at least, it is even a subject of astonishment, that men call atheism impiety, but do not so call superstition. Albeit Anaxagoras was obliged to flee from an accusation of impiety, when he had affirmed that the sun is a stone; though no one hath affirmed that the Kimmerians are impious in their denial of the existence of the sun. But what sayest thou? Is he guilty who supposeth that there are no gods; and is not he afflicted with far more guilty opinions, who considereth that the gods are such as the superstitious suppose them to be? Hence, I, at least, would rather that mankind should say of me, that Plutarchus doth not, nor ever did exist, than that they should say, that Plutarchus is a weak-minded, fickle man, that he is prone to anger, soon disposed to revenge, and offended at trifles; and that, if thou omittest to invite him when thou givest a dinner, or if, from pressure of business, thou dost not call upon him, if thou dost not address him, he will seize upon thee, and gnaw thy body, or catch hold of thy infant and beat him to death, or let loose a wild-beast of his upon thy crops and spoil thy harvest.

When Timotheus was at Athens, singing the glory of Diana, and calling her:

Mad, furious, inspired, frantic,

Kinesias, the lyric poet, rose from among the spectators, and said, "Then may my daughter be such as thou representest the goddess to be." And indeed such qualities, and even worse, do the superstitious believe concerning Diana:

Who biddeth this poor woman hang herself,
And addeth to the pains of her in child-bed;
Who, by some dead body touched,
Shall come and sprinkle thee;
And, if she meeteth thee abroad)
Shall subject thee to penitence.

Nor do the superstitious entertain milder sentiments than these, concerning Apollo, Juno, or Venus; for they fear and dread all these deities. Albeit, what blasphemy did Niobe ever utter against Latona, so great as that which superstition hath persuaded silly people to believe concerning the goddess? For it is believed, that, being reproached, she slew with her arrows the poor woman's

Six daughters and six youthful sons,

so implacable and insatiable was she in the infliction of evils! For if the goddess had really been angry, and had borne enmity to the wicked, and felt grieved at being ill-spoken of, and grew indignant, instead of laughing at the uninstructedness and ignorance of mortals—she ought to have slain with her arrows those who falsely accused her of such cruelty and bitterness, and could write and say such things of her. We condemn as barbarous and brutal, the rancorous savageness of Hecuba, when she saith:

Oh that I could seize his liver!
That I could cling to and devour it.

Yet the superstitious imagine, that if any one eateth a mænis or aphuas, the Syrian goddess will eat through his shin-bones, cover his body with ulcers, and dissolve his liver.

XI. Is it, therefore, irreligious to speak evil things of the gods, and not irreligious to think them? And is it not the thinking of

the blasphemer or curser which maketh this speaking improper? For we also ourselves condemn blasphemy or cursing, because it is sign of malevolence; and those who speak ill of us we consider our enemies, because we look upon them as unfaithful and evil-minded. But see'st thou what the superstitious think of the gods? They believe them to be furious, unfaithful, changeable, revengeful, cruel, and easily offended. Whence it is evident, that the superstitionist must hate and fear the gods. But how can he do otherwise than fear them, when he supposeth that the greatest of his misfortunes have happened to him, and will happen to him, through them? But he that hateth and feareth the gods is their enemy. Even if he feareth, and yet worshippeth, and offereth sacrifice, and sitteth in the temples, he is not remarkable in so doing. For, in like manner, men compliment tyrants, attend them, and erect golden statues to them, yet hate them in silence, despite of their frequent sacrifices. Hermoläus waited upon Alexander, Pausanius was in the body-guard of Philippus, as Chærea was in that of Caius Caligula; but each of these said, while following his despot:

I'd glut my vengeance on thee, if I could.

The atheist supposeth that there are no gods; and the superstitionist wisheth there were none; and believeth against his will, for he is afraid to disbelieve. Albeit, like Tantalus, who seeketh to remove the stone from above his head, so also this man would wish to remove the fear, which fully as much oppresseth him, and would embrace, and hail as a blessing the condition of the atheist as a comparative state of freedom.

So now, therefore, the atheist in no wise participateth in the misfortunes attendant on superstition, while the superstitionist, being in his heart an atheist, is too weak to think that of the gods which he wisheth.

XII. Moreover, the atheist giveth no handle whatsoever to superstition, but superstition hath given to atheism the very cause of its existence, and, since it hath existed, furnisheth a plea in its favour—no true or excellent plea indeed, but one not deficient in some excuse. For it was not anything reprehensible in the heaven, nor in the stars, nor in the seasons, nor in the periods of the moon, nor in the motions of the sun round the earth (which produce daylight and darkness), nor in the food of animals, nor in the production of fruits—it was not from seeing anything superfluous or disorderly in these things, that men fancied they knew that the universe was without a god. But it was the ridiculous actions and passions of superstition, her canting words, her frantic motions, her juggleries, and enchantments, and perambulations, and drummings, and impure purifications, and filthy sanctifications, and, at the temples, her barbarous and unlawful penances and bemirings. It is these things which make some persons say that it would be better that there should not be, than that there should be, gods, who can receive and bless such ceremonies, and be so unjust, and so unreasonable, and easily offended.

XIII. Would it not therefore have been better for those Gauls and Scythians to have had no notion, nor idea, nor tradition, concerning the gods, than to imagine the existence of gods who rejoice in the blood of slaughtered men, and who consider this the most perfect sacrifice and expiation? And how much would it have been better for the Carthaginians to have had a Critias or Diogoras for their first law-giver, nor to believe in any one among the gods or spirits, than they should sacrifice what they sacrificed to Saturn! Not as Empedocles saith, when alluding to those who sacrifice animals:

The son, transformed, is slaughtered by his sire,
Who, silly fool, then offereth up his prayers.

For, on the contrary, the Carthaginians sacrificed their children, knowing them and recognising them as such. And those who were childless purchased children from the poor, and slaughtered them like lambs or young pigeons. The mother, in the meanwhile, stood by, without either weeping or groaning; for, if she sighed or wept, she lost the price that had been agreed upon, and her child was nevertheless sacrificed. And all the space before the image was made to resound with the music of fifers and drummers, that the noise of the infant's crying might not be too audible.

Now, if any Typhons, or giants, had expelled the gods, and ruled over us in their place, what other sacrifices would they have delighted in, or what other sacraments would they have chosen? Amêstris, the wife of Xerxes, caused twelve men to be buried alive, as a propitiatory sacrifice for herself, to Hades, or the infernal Jupiter; of whom, nevertheless, Plato saith, that he is called Hades, because he is philanthropical, wise, and rich, and governeth the souls by persuasion and reason. Moreover, Xenophanes, the physician,* seeing that the Egyptians lamented and wept at their festivals, made a very proper observation to them, saying, "If they are gods, do not weep for them; but, if they are men, do not sacrifice to them."

XIV. But there is no disease so full of errors and perturbations, and so much mingled with opposite and incongruous opinions as superstition. We must therefore avoid it,

* In the proper sense of the word *physician*, that is (not a medical adviser, but) an investigator of natural effects and causes.

but safely and prudently, and not like those who, when without reason or common sense, fleeing the attack of robbers, or of wild beasts, or a fire, fall in with untrodden paths, full of pits and precipices. For thus some persons, avoiding superstition, proceed so far as to fall into a rough and refractory atheism, instead of remaining at that happy medium —piety.

END OF PLUTARCHUS.

NOTE TO "PLUTARCHUS," BY "WYTTENBACH."

THIS book is truly Plutarchean, though it is not expressly mentioned by the ancients. A phrase taken from it, is quoted by St. Maximus, and by Joh. Damascenus, in a MS. work, who attribute it to Plutarchus, but without mentioning the name of the treatise But Plutarchus names himself, and even if he had not named himself, the appearance and language of the book would have sufficiently proved him to be the writer.

In Lamprias's Catalogue, No. 150, as also in the Venetian copy, we read "peri deisidaimonias, pros Epikouron" (To Epicurus, concerning god-fear). The words, "pros Epikouron" (to Epicurus) excite some doubt. If, therefore, the title be correct, some lost treatise is meant: for the one which we now possess is not written against Epicurus; but, if the present treatise be meant, then the addition to the title must be spurious. I will not, however, deny, but that Plutarchus may have written a work, in which he defended the cause of "deisidaimonia," against Epicurus; as he does to a certain degree in his book, entitled "non suaviter vivi secundum Epicurum," where also he inserts an harangue against those who contend that Epicurus has given better reasons than Plato, for easily and cheerfully dying. And it is well known, that Plutarchus in his philosophical treatises frequently argues, academically and peripatetically, on both sides of a question; and inserts in his writings contrary opinions on the same argument; of which habit we have pointed out some proofs, when showing that Plutarchus was not the author of the "De Educatione Puerorum."

The present treatise is written "against superstition," to show that the superstitious are more grievously in error than atheists, and entertain a worse idea of the gods, and act ill even towards themselves: for, that atheists, although in error, as believing that there is no divine power, are yet less in error than the persons who suppose the gods to be evil, and that, by this error, they to a certain degree tend to make life more tranquil, inasmuch, at any rate, as they do not fear the gods; but that the superstitious are so foolish, that, by a perverted species of piety, they fall into the greatest impiety, forming the worst opinions of the gods, considering them as angry, cruel, and malevolent, and, in consequence of this error, pass their days and nights in perpetual trepidation (1).

Now Plutarchus has not written this dissertation to praise atheists; but, in order to lead the superstitious into the right path, and to admonish them, that, in avoiding impiety, they must not throw themselves into the vice which is the contrary of superstition, but that they must follow the virtue which is placed between the two extremes, namely, piety.

As the whole argument is treated in a more oratorical and popular, than in a dialectical and scientific, manner, and the treatise is almost wholly occupied with the blame of superstition, without any mention of its praises and advantages, or any accurate and express rules for its cure and prevention; therefore am I the more inclined to suppose, that the present work is but the half of a double treatise written on superstition (2).

It is consequently an error to imagine, that, in this work, the whole of Plutarch's sentiments on superstition are contained, and that herein that impiety, which the ancients called "atheotes," and which the moderns call atheism, is considered superior to every imaginable species of superstition. That some persons have been of this opinion is evident—from their being confuted, while Plutarchus is praised, by Tanaquil Faber, in the preface to his French translation of this treatise, and also from what we read in Pierre Bayle, Ralph Cudworth, and J. A. Fabricius, the last of whom understands Plutarch's proposition with tolerable correctness. Moreover, if my memory does not deceive me, J. Fr. Buddeus, in his book, "De Atheismo et Superstitionis," treats upon this question concerning Plutarchus. Now I will not venture to oppose my judgment to that of such learned men; yet I think I can perceive, and for Plutarch's sake I will not conceal my opinion, that those who have written on this subject have not paid sufficient attention to definitions (3) and distinctions.

For what is superstition, and what is atheism? And what are the species and degrees of these vices? When these words are explained, and compared with one another, we may then understand what sort, or degree, of atheism, ought to be preferred, or rejected, as compared with such or such a sort, or degree, of superstition. But, first of all, it is very difficult to define these words which are the subject of disputation. The word "atheist" may indeed be easily defined; as its derivation shows it to mean "one who supposes that there is no god." But this definition cannot be understood till we declare what we mean by the word "god."

Now it is well known, how much, not only whole nations, but even separate individuals—and not only the vulgar, but even the learned—differ in their notions and definitions of "god:" so that, the more they write upon the subject, the less they agree about it. Suppose, however, that we reduce this definition to the fewest possible terms, and say, that "god is an eternal(4) mind(5), the creator(6)and ruler(7) of all things."(8) Some persons will think that this definition implies too much, others that it implies too little: neither party will consent to be called atheists, and yet each party will accuse the

other of being atheists. "Certainly (says one party) the idea of god cannot be comprised in so scanty a definition: such a god cannot be the true god." (9) The other party answers: "You include so many attributes in your idea of the deity, that it cannot possibly be admitted: such a god is not the true god, and indeed cannot even exist." Such then is the present state of the subject. We are every day hearing that hacknied phrase, "the true god;" by which phrase every man implies his own peculiar notion of the deity, often that silly notion so unworthy the supreme power. (10)

And it would be luckly for us, if such notions, and such a method of argumentation, were confined to the unlearned vulgar. But now philosophers, at any rate persons who wish to be considered as philosophers, talk in the same random style. They dispute about "the true god," yet do not set out with a definition (11), considering that to be known by all persons. Afterwards they pronounce, that many of the Grecian and Roman sages were unacquainted with "the true god," and must therefore be considered as atheists. I may here observe, that this very commonly used appellation, "the true god," has come to us from the custom of the church, whose different sects formed, in ancient times, different notions of the deity, and where therefore in the habit of reproaching, not only the profane, but even one another, with an ignorance of the true god, and consequently with "atheotes."

Thus much concerning the word "atheist;" of which we can form no idea till we have determined our notion of the "deity."

Nor is the word "superstition" less arbitrarily used. The etymology and origin of the Latin word is uncertain (12): its signification however is not obscure, inasmuch as it answers to the Greek word "deisidaimonia," and is used as the translation of that word. Now this Greek word means literally "a fear of demons," and is used to express "an absurd fear of gods." It is therefore the opposite of "religion," which implies "a pious worship of the gods," to use the expression of Cicero (de Nat. Deor. 1. 42).

But superstition itself would be an endless subject, and is not the one before us. Our only desire is to find the interpretation of the name. Therefore, in the word "deisidaimonia," we must investigate the meaning of the words "dæmon" and "fear." And, in the first place, it is certain, that the word "daimon" was, in ancient times, used as synonymous with the word "theos," that is, god, fate, chance, fortune, and prosperity or adversity, the causes of which were considered as hidden, and as placed in the power of the gods. Hence the word "olbiodaimon" means "happy" or "blessed." Such is the meaning of the word in Homerus. Hesiodus considers the "daimones" (demons) as different from the gods, and inferior to them, Op. et D. 122. Plato also, in his "Sympos," p. 327, more particularly makes the dæmons the messengers and ministers of the gods. Afterwards the question was more fully agitated; and two sorts of dæmons were imagined, the good and the bad; of which distinction Plutarchus has treated in his "de Defectu Orac." p. 415, et alib.

The word "deisidaimonia," at whatever period it may have begun to be used, referred certainly, at first, both to gods and dæmons. But the bad sense gradually prevailed. It is indeed taken in the good sense, as meaning "the observance of the established religion," in certain passages of the ancients: as, for instance, in Xenophon's Cyropæd. III. 3. 6; & Agesil. XI. 8; Polyb. VI. 56. 7; though even here, and elsewhere, a middle signification may be retained. Moreover, Hesychius says: "a pious man, and fearing the gods," where Alberti makes some remarks upon the same subject.

But this favourable signification, whatever it may have been, was entirely lost in the usage of the contrary sense. For the words "fobeisthai" "theon," "fobos" "theou" (to have feared god, fear of god), do not always mean "piety towards god," which is the ecclesiastical meaning (13): but only refer to one particular department of piety, namely: that abstaiuing from evil actions which is produced by a fear of divine vengeance(14). On this subject, the sayings of the ancients should be consulted, which Casaubon has inserted in his first note on Theophrastus's Character of "deisidaimonia."

NOTES TO WYTTENBACH,

BY JULIAN HIBBERT.

1 If this long sentence be considered rough and obscure, all I can say is, that I have translated it as literally as possible, which, in such a delicate subject as superstition and atheism, is perhaps the wisest method.

2 But surely there is not the slightest authority for such an opinion, which, I suppose, Wyttenbach only advances by way of a screen, or a sedative.

3 Mankind would never quarrel if they would but *define*. Yet, how few books there are, which begin, like Euclid's Elements, with *definitions!*

4 But if god be retrospectively eternal, what was he doing before he created matter?

5 But what do we mean by the word *mind?* Do we mean a sort of human brain, composed of all Dr. Spurzheim's 33 or 34 organs?

6 But does this imply absolute creation out of nothing, or merely the distribution of chaotic matter?

7 But does this imply a peculiar, or a general providence? and how is it connected with the doctrines of predestination and free-will?

8 But does the word "things" imply angels, devils, &c., or are we to admit the emanation and absorption of spiritual substances in the substance of the divinity?

9 The true god is our god, namely, the god of the church of England by law established, that is, Yehouh, the Jewish god, as orthodoxically trisected into a species of Platonic deity.

10 I suppose Wyttenbach alludes to the painter's god; an anthropomorphous, long-bearded, and cloud-supported phantasm, bearing a scandalous resemblance to the pagan Jupiter. Mr. Carlile's picture of the deity, though founded upon scripture authorities, has not, I believe, as yet received the sanction of the church; which is the more to be regretted, as mere verbal descriptions are very inferior to visible representations: accordingly as Horatius has said (ad Pison. v. 180):

"Segnius irritant animos demissa per aurem,
Quam quæ sunt oculis subjecta fidelibus."

11 I suppose that Wyttenbach alludes to Meiners's Treatise *Of the True God*, in which, as far as I have read the work, I have not yet met with any express definition of the *true god*.

12 The word "superstition" is as great a stumbling block to the etymologists, as it is to the theologists. If "superstitio" be derived from "superstes," then I should think it must imply (not "survivance," but, what is probably the original and antemetaphorical sense of the word, namely,) *standing over*, that is, *presiding*, or *governing*. Albeit, I wish some oriental scholar would endeavour to find out, in I know not what language, such a word as "sheferstad," or "djepershdet," implying "fear" or "reverence."

13 Granted, with regard to these words; but, as regards the trinity and such like mysteries, heretics say, that the *ecclesiastical meaning is no meaning*.

14 *Divine Vengeance!*—Good god!

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LIBERTY AND NECESSITY.

BY DAVID HUME.

It might reasonably be expected, in questions which have been canvassed and disputed with great eagerness, since the first origin of science and philosophy, that the meaning of all the terms, at least, should have been agreed upon among the disputants; and our inquiries, in the course of two thousand years, been able to pass from words to the true and real subject of the controversy. For how easy may it seem to give exact definitions of the terms employed in reasoning, and make these definitions, not the mere sound of words, the object of future scrutiny and examination? But if we consider the matter more narrowly, we shall be apt to draw a quite opposite conclusion. From this circumstance alone, that a controversy has been long kept on foot, and remains still undecided, we may presume that there is some ambiguity in the expression, and that the disputants affix different ideas to the terms employed in the controversy. For as the faculties of the mind are supposed to be naturally alike in every individual—otherwise nothing could be more fruitless than to reason or dispute together—it were impossible, if men affix the same ideas to their terms, that they could so long form different opinions of the same subject; especially when they communicate their views, and each party turn themselves, on all sides, in search of arguments, which may give them the victory over their antagonists. It is true, if men attempt the discussion of questions which lie entirely beyond the reach of human capacity, such as those concerning the origin of worlds, or the economy of the intellectual system or region of spirits, they may long beat the air in their fruitless contests, and never arrive at any determinate conclusion. But if the question regard any subject of common life and experience, nothing, one would think, could preserve the dispute so long undecided, but some ambiguous expressions, which keep the antagonists still at a distance, and hinder them from grappling with each other.

This has been the case in the long disputed question concerning liberty and necessity; and to so remarkable a degree, that, if I be not much mistaken, we shall find, that all mankind, both learned and ignorant, have always been of the same opinion with regard to this subject, and that a few intelligible definitions would immediately have put an end to the whole controversy. I own, that this dispute has been so much canvassed on all hands, and has led philosophers into such a labyrinth of obscure sophistry, that it is no wonder if a sensible reader indulge his ease so far as to turn a deaf ear to the proposal of such a question, from which he can expect neither instruction nor entertainment. But the state of the argument here proposed may, perhaps, serve to renew his attention; as it has more novelty, promises at least some decision of the controversy, and will not much disturb his ease by any intricate or obscure reasoning.

I hope, therefore, to make it appear, that all men have ever agreed in the doctrine both of necessity and of liberty, according to any reasonable sense which can be put on these terms; and that the whole controversy has hitherto turned merely upon words. We shall begin with examining the doctrine of necessity.

It is universally allowed, that matter, in all its operations, is actuated by a necessary force, and that every natural effect is so precisely determined by the energy of its cause, that no other effect, in such particular circumstances, could possibly have resulted from it. The degree and direction of every motion is, by the laws of nature, prescribed with such exactness, that a living creature may as soon arise from the shock of two bodies, as motion, in any other degree or direction than what is actually produced by it. Would we, therefore, form a just and precise idea of *necessity*, we must consider whence that idea arises, when we apply it to the operation of bodies.

It seems evident, that if all the scenes of nature were continually shifted in such a manner, that no two events bore any resemblance to each other, but every object was entirely new, without any similitude to whatever had been seen before, we should never, in that case, have attained the least idea of necessity, or of a connexion among these objects. We might say, upon such a supposition, that one object or event has followed another; not that one was produced by the other. The relation of cause and effect must be utterly unknown to mankind. Inference and reasoning concerning the operations of nature would, from that moment, be at an end; and the memory and senses remain the only canals by which the knowledge of any real existence could possibly have access to the mind. Our idea, therefore, of necessity and causation arises entirely from the uniformity observable in the operations of nature; where similar objects are constantly conjoined together, and the mind is determined by custom to infer the one from the appearance of the other. These two circumstances form the whole of that necessity which we ascribe to matter. Beyond the constant *conjunction* of similar

objects, and the consequent *inference* from one to the other, we have no notion of any necessity or connexion.

If it appear, therefore, that all mankind have ever allowed, without any doubt or hesitation, that these two circumstances take place in the voluntary actions of men, and in the operations of mind; it must follow, that all mankind have ever agreed in the doctrine of necessity, and that they have hitherto disputed merely for not understanding each other.

As to the first circumstance, the constant and regular conjunction of similar events; we may possibly satisfy ourselves by the following considerations. It is universally acknowledged, that there is a great uniformity among the actions of men, in all nations and ages, and that human nature remains still the same, in its principles and operations. The same motives always produce the same actions; the same events follow from the same causes. Ambition, avarice, self-love, vanity, friendship, generosity, public spirit—these passions, mixed in various degrees, and distributed through society, have been, from the beginning of the world, and still are, the source of all the actions and enterprises which have ever been observed among mankind. Would you know the sentiments, inclinations, and course of life of the Greeks and Romans? Study well the temper and actions of the French and English—you cannot be much mistaken in transferring to the former *most* of the observations which you have made with regard to the latter. Mankind are so much the same, in all times and places, that history informs us of nothing new or strange in this particular. Its chief use is only to discover the constant and universal principles of human nature, by showing men in all varieties of circumstances and situations, and furnishing us with materials from which we may form our observations, and become acquainted with the regular springs of human action and behaviour. These records of wars, intrigues, factions, and revolutions, are so many collections of experiments, by which the politician, or moral philosopher, fixes the principles of his science; in the same manner as the physician, or natural philosopher, becomes acquainted with the nature of plants, minerals, and other external objects, by the experiments which he forms concerning them. Nor are the earth, water, and other elements, examined by Aristotle, and Hippocrates, more like to those which at present lie under our observation, than the men, described by Polybius and Tacitus, are to those who now govern the world.

Should a traveller, returning from a far country, bring us an account of men wholly different from any with whom we were ever acquainted; men, who were entirely divested of avarice, ambition, or revenge; who knew no pleasure but friendship, generosity, and public spirit; we should immediately, from these circumstances, detect the falsehood, and prove him a liar, with the same certainty as if he had stuffed his narration with stories of centaurs and dragons, miracles and prodigies. And if we would explode any forgery in history, we cannot make use of a more convincing argument, than to prove that the actions ascribed to any person are directly contrary to the course of nature, and that no human motives, in such circumstances, could ever induce him to such a conduct. The veracity of Quintus Curtius is as much to be suspected, when he describes the supernatural courage of Alexander, by which he was hurried on singly to attack multitudes, as when he describes his supernatural force and activity, by which he was able to resist them. So readily and universally do we acknowledge a uniformity in human motives and actions as well as in the operations of body.

Hence, likewise, the benefit of that experience, acquired by long life and a variety of business and company, in order to instruct us in the principles of human nature, and regulate our future conduct, as well as speculation. By means of this guide, we mount up to the knowledge of men's inclinations and motives, from their actions, expressions, and even gestures; and again descend to the interpretation of their actions, from our knowledge of their motives and inclinations. The general observations, treasured up by a course of experience, give us the clue of human nature, and teach us to unravel all its intricacies. Pretexts and appearances no longer deceive us—public declarations pass for the specious colouring of a cause—and though virtue and honour be allowed their proper weight and authority, that perfect disinterestedness, so often pretended to, is never expected in multitudes and parties; seldom in their leaders; and scarcely even in individuals of rank or station. But were there no uniformity in human actions, and were every experiment, which we could form of this kind, irregular and anomalous, it were impossible to collect any general observations concerning mankind; and no experience, however accurately digested by reflection, would ever serve to any purpose. Why is the aged husbandman more skilful in his calling than the young beginner, but because there is a certain uniformity in the operation of the sun, rain, and earth, towards the production of vegetables—and experience teaches the old practitioner the rules by which this operation is governed and directed?

We must not, however, expect that this uniformity of human actions should be carried to such a length, as that all men, in the same circumstances, will always act precisely in the same manner, without making any allowance for the diversity of characters, prejudices, and opinions. Such a uniformity

in every particular, is found in no part of nature. On the contrary, from observing the variety of conduct in different men, we are enabled to form a greater variety of maxims, which still suppose a degree of uniformity and regularity.

Are the manners of men different in different ages and countries? We learn thence the great force of custom and education, which mould the human mind from its infancy, and form it into a fixed and established character. Is the behaviour and conduct of the one sex very unlike that of the other? It is thence we become acquainted with the different characters which nature has impressed upon the sexes, and which she preserves with constancy and regularity. Are the actions of the same person much diversified in the different periods of his life, from infancy to old age? This affords room for many general observations concerning the gradual change of our sentiments and inclinations, and the different maxims which prevail in the different ages of human creatures. Even the characters which are peculiar to each individual have a uniformity in their influence; otherwise our acquaintance with the persons, and our observation of their conduct, could never teach us their dispositions, or serve to direct our behaviour with regard to them.

I grant it possible to find some actions which seem to have no regular connexion with any known motives, and are exceptions to all the measures of conduct which have ever been established for the government of men. But if we would willingly know what judgment should be formed of such irregular and extraordinary actions, we may consider the sentiments commonly entertained with regard to those irregular events, which appear in the course of nature, and the operations of external objects. All causes are not conjoined to their usual effects with like uniformity. An artificer who handles only dead matter, may be disappointed of his aim, as well as the politician, who directs the conduct of sensible and intelligent agents.

The vulgar, who take things according to their first appearance, attribute the uncertainty of events to such an uncertainty in the causes as makes the latter often fail of their usual influence, though they meet with no impediment in their operation. But philosophers, observing that almost in every part of nature there is contained a vast variety of springs and principles, which are hid, by reason of their minuteness or remoteness, find that it is at least possible the contrariety of events may not proceed from any contingency in the cause, but from the secret operation of contrary causes. This possibility is converted into certainty by farther observation, when they remark that, upon an exact scrutiny, a contrariety of effects always betrays a contrariety of causes, and proceeds from their mutual opposition. A peasant can give no better reason for the stopping of any clock or watch, than to say that it does not commonly go right—but an artist easily perceives, that the same force in the spring or pendulum has always the same influence on the wheels, but fails of its usual effect, perhaps, by reason of a grain of dust, which puts a stop to the whole movement. From the observation of several parallel instances, philosophers form a maxim that the connexion between all causes and effects is equally necessary, and that its seeming uncertainty in some instances proceeds from the secret opposition of contrary causes.

Thus, for instance, in the human body, when the usual symptoms of health or sickness disappoint our expectation; when medicines operate not with their wonted powers; when irregular events follow from any particular cause; the philosopher and physician are not surprised at the matter, nor are ever tempted to deny, in general, the necessity and uniformity of those principles by which the animal economy is conducted. They know that a human body is a mighty complicated machine; that many secret powers lurk in it, which are altogether beyond our comprehension; that to us it must often appear very uncertain in its operations; and that, therefore, the irregular events, which outwardly discover themselves, can be no proof that the laws of nature are not observed with the greatest regularity in its internal operations and government.

The philosopher, if he be consistent, must apply the same reasoning to the actions and volitions of intelligent agents. The most irregular and unexpected resolutions of men may frequently be accounted for by those who know every particular circumstance of their character and situation. A person of an obliging disposition gives a peevish answer—but he has the toothache, or has not dined. A stupid fellow discovers an uncommon alacrity in his carriage—but he has met with a sudden piece of good fortune. Or, even when an action, as sometimes happens, cannot be particularly accounted for, either by the person himself or by others, we know, in general, that the characters of men are, to a certain degree, inconstant and irregular. This is, in a manner, the constant character of human nature; though it be applicable, in a more particular manner, to some persons who have no fixed rule for their conduct, but proceed in a continued course of caprice and inconstancy. The internal principles and motives may operate in a uniform manner, notwithstanding these seeming irregularities; in the same manner as the winds, rain, clouds, and other variations of the weather, are supposed to be governed by steady principles, though not easily discoverable by human sagacity and inquiry.

Thus it appears, not only that the con-

junction between motives and voluntary actions is as regular and uniform as that between the cause and effect in any part of nature; but, also, that this regular conjunction has been universally acknowledged among mankind, and has never been the subject of dispute, either in philosophy or common life. Now, as it is from past experience that we draw all inferences concerning the future, and as we conclude that objects will always be conjoined together, which we find to have always been conjoined; it may seem superfluous to prove that this experienced uniformity in human actions is a source whence we draw *inferences* concerning them. But in order to throw the argument into a greater variety of lights, we shall also insist, though briefly, on this latter topic.

The mutual dependence of men is so great, in all societies, that scarce any human action is entirely complete in itself, or is performed without some reference to the actions of others, which are requisite to make it answer fully the intention of the agent. The poorest artificer, who labours alone, expects at least the protection of the magistrate, to ensure him the enjoyment of the fruits of his labour. He also expects, that, when he carries his goods to market, and offers them at a reasonable price, he shall find purchasers; and shall be able, by the money he acquires, to engage others to supply him with those commodities which are requisite for his subsistence. In proportion as men extend their dealings, and render their intercourse with others more complicated, they always comprehend, in their schemes of life, a greater variety of voluntary actions, which they expect, from the proper motives, to co-operate with their own. In all these conclusions, they take their measures from past experience, in the same manner as in their reasonings concerning external objects; and firmly believe, that men, as well as all the elements, are to continue in their operations the same that they have ever found them. A manufacturer reckons upon the labour of his servants for the execution of any work, as much as upon the tools which he employs, and would be equally surprised were his expectations disappointed. In short, this experimental inference and reasoning concerning the actions of others enters so much into human life, that no man, while awake, is ever a moment without employing it. Have we not reason, therefore, to affirm that all mankind have always agreed in the doctrine of necessity, according to the foregoing definition and explication of it?

Nor have philosophers ever entertained a different opinion from the people in this particular. For not to mention that almost every action of their life supposes that opinion, there are even few of the speculative parts of learning to which it is not essential. What would become of *history*, had we not a dependence on the veracity of the historian, according to the experience which we have had of mankind? How could *politics* be a science, if laws and forms of government had not a uniform influence upon society? Where would be the foundation of *morals*, if particular characters had no certain or determinate power to produce particular sentiments, and if these sentiments had no constant operation on actions? And with what pretence could we employ our *criticism* upon any poet or polite author, if we could not pronounce the conduct and sentiments of his actors either natural or unnatural, to such characters, and in such circumstances? It seems almost impossible, therefore, to engage, either in science or action of any kind, without acknowledging the doctrine of necessity, and this *inference* from motives to voluntary actions, from characters to conduct.

And, indeed, when we consider how aptly *natural* and *moral* evidence link together, and form only one chain of argument, we shall make no scruple to allow that they are of the same nature, and derived from the same principles. A prisoner, who has neither money nor interest, discovers the impossibility of his escape, as well when he considers the obstinacy of the gaoler, as the walls and bars with which he is surrounded; and, in all attempts for his freedom, chooses rather to work upon the stone and iron of the one, that upon the inflexible nature of the other. The same prisoner, when conducted to the scaffold, foresees his death as certainly from the constancy and fidelity of his guards, as from the operation of the axe or wheel. His mind runs along a certain train of ideas: the refusal of the soldiers to consent to his escape; the action of the executioner; the separation of the head and body; bleeding, convulsive motions, and death. Here is a connected chain of natural causes and voluntary actions; but the mind feels no difference between them, in passing from one link to another; nor is less certain of the future event than if it were connected with the objects present to the memory or senses, by a train of causes cemented together by what we are pleased to call a *physical* necessity. The same experienced union has the same effect on the mind, whether the united objects be motives, volition, and actions, or figure and motion. We may change the names of things, but their nature and their operation on the understanding never change.

Were a man, whom I know to be honest and opulent, and with whom I live in intimate friendship, to come into my house, where I am surrounded with my servants, I rest assured that he is not to stab me before he leaves it, in order to rob me of my silver standish; and I no more suspect this event, than the falling of the house itself, which is new, and solidly built and founded. *But he*

may have been seized with a sudden and unknown frensy. So may a sudden earthquake arise, and shake and tumble my house about my ears. I shall therefore change the suppositions. I shall say, that I know with certainty, that he is not to put his hand into the fire, and hold it there till it be consumed: and this event, I think I can foretel with the same assurance, as that, if he throw himself out of the window, and meet with no obstruction, he will not remain a moment suspended in the air. No suspicion of an unknown frenzy can give the least possibility to the former event, which is so contrary to all the known principles of human nature. A man who, at noon, leaves his purse full of gold on the pavement at Charing-cross, may as well expect that it will fly a way, like a feather, as that he will find it untouched an hour after. Above one half of human reasonings contain inferences of a similar nature, attended with more or less degrees of certainty, proportioned to our experience of the usual conduct of mankind in such particular situations.

I have frequently considered, what could possibly be the reason why all mankind, though they have ever, without hesitation, acknowledged the doctrine of necessity, in their whole practice and reasoning, have yet discovered such a reluctance to acknowledge it in words, and have rather shown a propensity, in all ages, to profess the contrary opinion. The matter, I think, may be accounted for after the following manner. If we examine the operations of body, and the production of effects from their causes, we shall find that all our faculties can never carry us farther in our knowledge of this relation, than barely to observe that particular objects are *constantly conjoined* together, and that the mind is carried, by a *customary transition*, from the appearance of one to belief of the other. But though this conclusion concerning human ignorance be the result of the strictest scrutiny of this subject, men still entertain a strong propensity to believe that they penetrate farther into the powers of nature, and perceive something like a necessary connexion between the cause and the effect. When again they turn their reflections towards the operations of their own minds, and *feel* no such connexion of the motive and the action, they are thence apt to suppose that there is a difference between the effects which result from material force, and those which arise from thought and intelligence. But being once convinced that we know nothing farther of causation of any kind, than merely the *constant conjunction* of objects, and the consequent *inference* of the mind from one to another, and finding that these two circumstances are universally allowed to have place in voluntary actions, we may be more easily led to own the same necessity common to all causes. And though this reasoning may contradict the systems of many philosophers, in ascribing necessity to the determinations of the will, we shall find, upon reflection, that they dissent from it in words only, not in their real sentiment. Necessity, according to the sense in which it is here taken, has never yet been rejected, nor can ever, I think, be rejected by any philosopher. It may only, perhaps, be pretended that the mind can perceive, in the operations of matter, some farther connexion between the cause and effect; and a connexion that has not place in the voluntary actions of intelligent beings. Now whether it be so or not, can only appear upon examination, and it is incumbent on these philosophers to make good their assertion, by defining or describing that necessity, and pointing it out to us in the operations of material causes.

It would seem, indeed, that men begin at the wrong end of this question concerning liberty and necessity, when they enter upon it by examining the faculties of the soul, the influence of the understanding, and the operations of the will. Let them first discuss a more simple question, namely, the operations of body and of brute unintelligent matter; and try whether they can there from any idea of causation and necessity except that of a constant conjunction of objects, and subsequent inference of the mind from one to another. If these circumstances form, in reality, the whole of that necessity, which we conceive in matter, and if these circumstances be also universally acknowledged to take place in the operations of the mind, the dispute is at an end—at least, must be owned to be thenceforth merely verbal. But as long as we will rashly suppose that we have some farther idea of necessity and causation in the operations of external objects—at the same time that we can find nothing farther in the voluntary actions of the mind—there is no possibility of bringing the question to any determinate issue while we proceed upon so erroneous a supposition. The only method of undeceiving us, is to mount up higher; to examine the narrow extent of science when applied to material causes; and to convince ourselves that all we know of them is the constant conjunction and inference above mentioned. We may, perhaps, find that it is with difficulty we are induced to fix such narrow limits to human understanding: but we can afterwards find no difficulty when we come to apply this doctrine to the actions of the will. For, as it is evident that these have a regular conjunction with motives, and circumstances, and characters —and as we always draw inferences from one to the other, we must be obliged to acknowledge, in words, that necessity which we have already avowed, in every deliberation of our lives, and in every step of our conduct and behaviour.

But to proceed in this reconciling project

with regard to the question of liberty and necessity; the most contentious question, of metaphysics, the most contentious science. It will not require many words to prove that all mankind have ever agreed in the doctrine of liberty as well as in that of necessity, and that the whole dispute, in this respect also, has been, hitherto, merely verbal. For, what is meant by liberty, when applied to voluntary actions? We cannot surely mean, that actions have so little connexion with motives, inclinations, and circumstances that one does not follow with a certain degree of uniformity from the other, and that one affords no inference by which we can conclude the existence of the other. For these are plain and acknowledged matters of fact. By liberty, then, we can only mean *a power of acting or not acting, according to the determinations of the will*—that is, if we choose to remain at rest, we may; if we choose to move, we also may. Now this hypothetical liberty is universally allowed to belong to every one, who is not a prisoner and in chains. Here then is no subject of dispute.

Whatever definition we may give of liberty, we should be careful to observe two requisite circumstances: first, that it be consistent with plain matter of fact; second, that it be consistent with itself. If we observe the circumstances, and render our definition intelligible, I am persuaded that all mankind will be found of one opinion with regard to it.

It is universally allowed that nothing exists without a cause of its existence, and that chance, when strictly examined, is a mere negative word, and means not any real power, which has any where a being in nature. But it is pretended that some causes are necessary, some not necessary, Here then is the advantage of definitions. Let any one *define* a cause, without comprehending, as a part of the definition, a *necessary connexion* with its effect; and let him show distinctly the origin of the idea, expressed by the definition; and I shall readily give up the whole controversy. But if the foregoing explication of the matter be received, this must be absolutely impracticable. Had not objects a regular conjunction with each other, we should never have entertained any notion of cause and effect; and this regular conjunction produces that inference of the understanding, which is the only connexion that we can have any comprehension of. Whoever attempts a definition of cause, exclusive of these circumstances, will be obliged either to employ unintelligible terms, or such as are synonymous to the term which he endeavours to define. And if the definition above mentioned be admitted, liberty, when opposed to necessity, not to constraint, is the same thing with chance, which is universally allowed to have no existence.

PART II.

There is no method of reasoning more common and yet none more blameable, than, in philosophical disputes, to endeavour the refutation of any hyphothesis, by a pretence of its dangerous consequences to religion and morality. When any opinion leads to absurdities, it is certainly false; but it is not certain that an opinion is false, because it is of dangerous consequence. Such topics, therefore, ought entirely to be forborne; as serving nothing to the discovery of truth, but only to make the person of an antagonist odious. This I observe in general, without pretending to draw any advantage from it. I frankly submit to an examination of this kind, and shall venture to affirm, that the doctrines, both of necessity and of liberty, as above explained, are not only consistent with morality, but are absolutely essential to its support.

Necessity may be defined two ways, conformably to the two definitions of *cause*, of which it makes an essential part. It consists either in the constant conjunction of like objects, or in the inference of the understanding from one object to another. Now necessity, in both these senses (which, indeed, are, at bottom, the same), has universally, though tacitly, in the schools, in the pulpit, and in common life, been allowed to belong to the will of man; and no one has ever pretended to deny, that we can draw inferences concerning human actions, and that those inferences are founded on the experienced union of like actions, with like motives, inclinations, and circumstances. The only particular in which any one can differ is, that either, perhaps, he will refuse to give the name of necessity to this property of human actions—but as long as the meaning is understood, I hope the word can do no harm—or, that he will maintain it possible to discover something farther in the operations of matter. But this, it must be acknowledged, can be of no consequence to morality or religion, whatever it may be to natural philosophy or metaphysics. We may here be mistaken in asserting, that there is no idea of any other necessity or connexion in the actions of body; but surely we ascribe nothing to the actions of the mind, but what every one does, and must readily allow of. We change no circumstance in the received orthodox system with regard to the will, but only in that with regard to material objects and causes. Nothing, therefore, can be more innocent, at least, than this doctrine.

All laws being founded on rewards and punishments, it is supposed, as a fundamental principle, that these motives have a regular and uniform influence on the mind, and both produce the good, and prevent the evil actions. We may give to this influence what name we please; but as it is usually con-

joined with the action, it must be esteemed a *cause*, and be looked upon as an instance of that necessity which we would here establish.

The only proper object of hatred or vengeance, is a person or creature, endowed with thought and consciousness; and when any criminal or injurious actions excite that passion, it is only by their relation to the person or connexion with him. Actions are, by their very nature, temporary and perishing; and where they proceed not from some *cause* in the character and disposition of the person who performed them, they can neither redound to his honour, if good; nor infamy, if evil. The actions themselves may be blameable; they may be contrary to all the rules of morality and religion; but the person is not answerable for them; and as they proceeded from nothing in him that is durable and constant, and leave nothing of that nature behind them, it is impossible he can, upon their account, become the object of punishment or vengeance. According to the principle, therefore, which denies necessity, and consequently causes, a man is as pure and untainted after having committed the most horrid crime, as at the first moment of his birth, nor is his character anywise concerned in his actions; since they are not derived from it, and the wickedness of the one can never be used as a proof of the depravity of the other.

Men are not blamed for such actions as they perform ignorantly and casually, whatever may be the consequences. Why? but because the principles of these actions are only momentary, and terminate in them alone. Men are less blamed for such actions as they perform hastily and unpremeditately, than for such as proceed from deliberation. For what reason? but because a hasty temper, though a constant cause or principle in the mind, operates only by intervals, and infects not the whole character. Again, repentance wipes off every crime, if attended with a reformation of life and manners. How is this to be accounted for? but by asserting that actions render a person criminal, merely as they are proofs of criminal principles in the mind; and when, by an alteration of these principles, they cease to be just proofs, they likewise cease to be criminal. But, except upon the doctrine of necessity, they never were just proofs, and consequently never were criminal.

It will be equally easy to prove, and from the same arguments, that *liberty*, according to that definition above mentioned, in which all men agree, is also essential to morality, and that no human actions, where it is wanting, are susceptible of any moral qualities or can be the objects either of approbation or dislike. For, as actions are objects of our moral sentiment, so far only as they are indications of the internal character, passions, and affections, it is impossible that they can give rise either to praise or blame, where they proceed not from these principles, but are derived altogether from external violence.

I pretend not to have obviated or removed all objections to this theory, with regard to necessity and liberty. I can foresee other objections, derived from topics which have not here been treated of. It may be said, for instance, that if voluntary actions be subjected to the same laws of necessity with the operations of matter, there is a continued chain of necessary causes, pre-ordained and pre-determined, reaching from the original cause of all, to every single volition of every human creatnre. No contingency any where in the universe; no indifference; no liberty. While we act, we are, at the same time, acted upon. The ultimate author of all our volitions is the creator of the world, who first bestowed motion on this immense machine, and placed all beings in that particular position whence every subsequent event, by an inevitable necessity, must result. Human actions, therefore, either can have no moral turpitude at all—as proceeding from so good a cause—or if they have any turpitude, they must involve our creator in the same guilt, while he is acknowledged to be their ultimate cause and author. For, as a man who fired a mine is answerable for all the consequences, whether the train he employed be long or short, so, wherever a continued chain of necessary causes is fixed, that being, either finite or infinite, who produces the first, is likewise the author of all the rest, and must both bear the blame, and acquire the praise which belong to them. Our clear and unalterable ideas of morality establish this rule, upon unquestionable reasons, when we examine the consequences of any human action; and these reasons must still have greater force, when applied to the volitions and intentions of a being, infinitely wise and powerful. Ignorance or impotence may be pleaded for so limited a creature as man; but those imperfections have no place in our creator. He foresaw, he ordained, he intended all those actions of men, which we so rashly pronounce criminal. And we must, therefore, conclude, either that they are not criminal, or that the deity, not man, is accountable for them. But as either of these positions is absurd and impious, it follows, that the doctrine from which they are deduced cannot possibly be true, as being liable to all the same objections. An absurd consequence, if necessary, proves the original doctrine to be absurd; in the same manner as criminal actions render criminal the original cause, if the connexion between them be necessary and inevitable.

This objection consists of two parts, which we shall examine separately; first, that if human actions can be traced up, by a necessary chain, to the deity, they can never be criminal; on account of the infinite perfection of that being, from whom they

are derived, and who can intend nothing but what is altogether good and laudable. Or, second, if they be criminal, we must retract the attribute of perfection, which we ascribe to the deity, and must acknowledge him to be the ultimate author of guilt and moral turpitude in all his creatures.

The answer to the first objection seems obvious and convincing. There are many philosophers, who, after an exact scrutiny of all the phenomena of nature, conclude that the *whole*, considered as one system, is, in every period of its existence, ordered with perfect benevolence; and that the utmost possible happiness will, in the end, result to all created beings, without any mixture of positive or absolute ill and misery. Every physical ill, say they, makes an essential part of this benevolent system, and could not possibly be removed, even by the deity himself, considered as a wise agent, without giving entrance to greater ill, or excluding greater good, which will result from it. From this theory, some philosophers, and the ancient Stoics among the rest, derived a topic of consolation under all afflictions, while they taught their pupils, that those ills under which they laboured, were, in reality, goods to the universe; and that to an enlarged view, which could comprehend the whole system of nature, every event became an object of joy and exultation. But though this topic be specious and sublime, it was soon found in practice weak and ineffectual. You would surely more irritate than appease a man, lying under the racking pains of the gout, by preaching up to him the rectitude of those general laws, which produced the malignant humours in his body, and led them through the proper canals to the sinews and nerves, where they now excite such acute torments. These enlarged views may, for a moment, please the imagination of a speculative man, who is placed in ease and security; but neither can they dwell with constancy on his mind, even though undisturbed by the emotions of pain or passion, much less can they maintain their ground, when attacked by such powerful antagonists, The affections take a narrower and more natural survey of their object; and by an economy, more suitable to the infirmity of human minds, regard alone the beings around us, and are actuated by such events as appear good or ill to the private system.

The case is the same with *moral* as with *physical* ill. It cannot reasonably be supposed, that those remote considerations, which are found of so little efficacy with regard to one, will have a more powerful influence with regard to the other. The mind of man is so formed by nature, that upon the appearance of certain characters, dispositions, and actions, it immediately feels the sentiment of approbation or blame; nor are there any emotions more essential to its frame and constitution. The characters which engage our approbation, are chiefly such as contribute to the peace and security of human society; as the characters which excite blame are chiefly such as tend to public detriment and disturbance; whence it may reasonably be presumed, that the moral sentiments arise, either mediately or immediately, from a reflection on these opposite interests. What though philosophical meditations establish a different opinion or conjecture; that every thing is right with regard to the *whole*, and that the qualities, which disturb society, are, in the main, as beneficial, and are as suitable to the primary intention of nature, as those which more directly promote its happiness and welfare? Are such remote and uncertain speculations able to counterbalance, the sentiments which arise from the natural and immediate view of the objects? A man who is robbed of a considerable sum, does he find his vexation for the loss any wise diminished by these sublime reflections? Why, then, should his moral resentment against the crime be supposed incompatible with them? Or, why should not the acknowledgment of a real distinction between vice and virtue be reconcileable to all speculative systems of philosophy, as well as that of a real distinction between personal beauty and deformity? Both these distinctions are founded in the natural sentiments of the human mind; and these sentiments are not to be controuled or altered by any philosophical theory or speculation whatsoever.

The second objection admits not of so easy and satisfactory an answer; nor is it possible to explain distinctly how the deity can be the mediate cause of all the actions of men, without being the author of sin and moral turpitude. These are mysteries, which mere natural and unassisted reason is very unfit to handle; and whatever system she embraces, she must find herself involved in inextricable difficulties, and even contradictions, at every step which she takes with regard to such subjects. To reconcile the indifference and contingency of human actions with prescience; or to defend absolute decrees, and yet free the deity from being the author of sin, has been found hitherto to exceed all the power of philosophy. Happy, if she be thence sensible of her temerity, when she pries into these sublime mysteries; and, leaving a scene so full of obsurities and perplexities, return, with suitable modesty, to her true and proper province, the examination of common life; where she will find difficulties enough to employ her inquiries, without launching into so boundless an ocean of doubt, uncertainty, and contradiction.

THE END.

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LIFE OF BENEDICT SPINOZA.

EARLY in the seventeenth century, on a fair evening of summer, a little Jewish boy was playing, with his sisters, on the Burgwal of Amsterdam, close to the Portuguese synagogue. His face was mild and ingenuous; his eyes were small, but bright, quick, and penetrative; and the dark hair floated in luxuriant curls over his neck and shoulders. Noticeable, perhaps, for nothing but his beauty and joyousness, the little boy played on, unmarked amongst the active citizens of that active town. The Dutch then occupied the thoughtful attention of all Europe. After having first conquered for themselves firm footing on this earth, by rescuing their country from the sea, they had thrown off the oppressive yoke of the then mighty Spain, and had now conquered for themselves a freedom from that far greater tyranny, the tyranny of thought. Amsterdam was noisy with the creaking of cordage, the bawling of sailors, and the busy trafficking of traders. The Zuyder Zee was crowded with vessels laden with precious stores from all quarters of the globe. The canals which ramify that city, like a great arterial system, were blocked up with boats and barges; the whole scene was vivid with the greatness and the littleness of commerce. Heedless of all this turmoil, as unheeded in it—heedless of all those higher mysteries of existence the solution of which was hereafter to be the endeavour of his life—untouched by any of those strange questionings which a restless spirit cannot answer, but which it refuses to have answered by others—heedless of everything but his game, that little boy played merrily with his sisters. That boy was Benedict Spinoza!

His parents were honest merchants of Amsterdam, who had settled there in company with a number of their brethren, on escaping the persecution to which all Jews were subject in Spain. The young Baruch* was at first destined to commerce, but his passion for study, and the precocity of his intellect, made his parents alter their resolution in favour of a rabbinical education—a resolution warranted by his sickly constitution, which had increased his love of study. The sickly child is mostly thoughtful; he is thrown upon himself, and his own resources; he suffers, and asks himself the cause of his pains, and asks himself whether the world suffers like him; whether he is one with nature, and subject to the same laws, or whether he is apart from it, and regulated by distinct laws? From these he rises to the awful questions—why? whence? and whither?

The education of the Jews was almost exclusively religious, the old testament and the Talmud forming their principal studies. Spinoza entered into them with a fanatical zeal, which, backed as it was by remarkable penetration and subtlety, won the admiration of the Chief Rabbin, Saul Levi Morteira, who became his guide and instructor. Great, indeed, were the hopes entertained of this youth, who at fourteen rivalled almost all the doctors in the exactitude and extent of his biblical knowledge. But these hopes were turned to fears, when they saw that young and pertinacious spirit pursue its undaunted inquiries into whatever region they conducted him, and found him putting difficulties to them, which they, rabbins and philosophers, were unable to solve.

Spinoza was to be deterred neither by threats nor by sophistications. He found in the old testament no mention of the doctrine of immortality—there was complete silence on the point.* He made no secret of his opinions; and two of his schoolfellows, irritated at his intellectual superiority, or

*Baruch was Spinoza's Hebrew name, which he himself translated into Latin as Benedictus; from which some have erroneously supposed that he embraced christianity, whereas he only renounced judaism.

*On this silence Warburton endeavoured to establish the divinity of the legation of Moses; and Bishop Sherlock has exerted considerable ingenuity in explaining the discrepancy which sceptics had seized hold of as an argument in their favour.

else anxious to curry favour with the rabbins, reported his heresy with the usual fertility of exaggeration. Summoned to appear before the synagogue, he obeyed with a gay carelessness, conscious of his innocence. His judges, finding him obstinate in his opinions, threatened him with excommunication; he answered with a sneer. Morteira, informed of the danger, hastened to confront his rebellious pupil, but Spinoza remained as untouched by his rhetoric as he was unconvinced by his argument. Enraged at this failure, Morteira took a higher tone, and threatened him with excommunication, unless he at once retracted. His pupil was irritated, and replied in sarcasms. The rabbin then impetuously broke up the assembly, and vowed "only to return with the thunderbolt in his hand."

In anticipation of the threatened excommunication, he wisely withdrew himself from the synagogue—a step that profoundly mortified his enemies, as he thereby rendered futile all intimidations which had been employed against him, particularly the otherwise terrible excommunication; for what terror could such a sentence inspire in one who voluntarily absented himself from the society which pretended to exclude him?

Dreading his ability, and the force of his example, the synagogue made him an offer of an annual pension of a thousand florins, if he would only consent to be silent, and assist from time to time at their ceremonies. Spinoza, indignant at such an attempt to palter with his conscience, refused it with scorn. As neither threats nor temptations could turn him from his path, fanaticism conceived another plan. One evening, as Spinoza was coming out of the theatre, where he had been relaxing his over-tasked mind, he was startled by the fierce expression of a dark face, thrust eagerly before his. The glare of blood-thirsty fanaticism arrested him; a knife gleamed in the air, and he had barely time to parry the blow. It fell upon his chest, but, fortunately deadened in its force, only tore his coat. The assassin escaped. Spinoza walked home thoughtful.*

The day of excommunication at length arrived; and a vast concourse of Jews assembled to witness the awful ceremony. It began by the solemn and silent lighting of a quantity of black wax candles, and by opening the tabernacle wherein were deposited the Books of the Law of Moses. Thus were the dim imaginations of the faithful prepared for all the horror of the scene. Morteira, the ancient friend and master, now the fiercest enemy of the condemned, was to order the execution. He stood there, pained, but implacable; the people fixed their eager eyes upon him. High above, the chanter rose and chanted forth, in loud lugubrious tones, the words of execration; while from the opposite side another mingled with these curses the thrilling sounds of the trumpet; and now the black candles were reversed, and were made to melt, drop by drop, into a huge tub filled with blood! This spectacle —symbol of the most terrible faith—made the whole assembly shudder; and when the final *anathema maranatha!* were uttered, and the lights all suddenly immersed in the blood, a cry of religious horror and execration burst from all; and in that solemn darkness, and to those solemn curses, they shouted—amen, amen!

And thus was the young truth-seeker expelled from his community, and his friends and relations forbidden to hold intercourse with him. Like the young and energetic Shelley, who afterwards imitated him, he found himself an outcast in this busy world, with no other guides through its perplexing labyrinths than sincerity and self-dependence. Two or three new friends soon presented themselves; men who warred against their religion as he had warred against his own; and a bond of sympathy was forged out of a common injustice. Here again we trace a resemblance to Shelley, who, discountenanced by his relations, sought amongst a few sceptical friends to supply the affections he was thus deprived of. Like Spinoza, he too had only sisters, with whom he had been brought up. No doubt, in both cases, the consciousness of sincerity, and the pride of martyrdom, were great sustainments in this combat with society. They are always so; and it is well that they are so, or the battle would never be fought; but they never entirely replace the affections. Shut from our family, we may seek a brotherhood of apostacy; but these new and precarious intellectual sympathies are no compensation for the loss of the emotive sympathies, with all their links of association, and all their memories of childhood.

Spinoza must have felt this; and as Shelley, in a rash marriage, endeavoured to fill the void of his yearning heart, so Spinoza, urged we must think by the same feeling, sought the daughter of his friend and master, Vanden Ende, as his wife.

This Vanden Ende had some influence on Spinoza's life. He was a physician in Amsterdam, who conducted a philological seminary with such success, that all the wealthy citizens sent him their sons; but it was afterwards discovered, that to every dose of Latin he added a grain of atheism. He undertook to instruct Spinoza in Latin, and to give him board and lodging on condi-

* Some of the biographers contradict Bayle's statement of the assassination being attempted as Spinoza was leaving the theatre, and declare that he was coming from the synagogue; but they forget that he had entirely renounced going there, and this was the probable motive of the assassin.

tion that he should subsequently aid him in instructing his scholars. This Spinoza accepted with joy, for although master of the Hebrew, German, Spanish, Portugese (and of course, Dutch) languages, he had long felt the urgent necessity of Latin.

Vanden Ende had a daughter; her personal charms were equivocal, but she was thoroughly versed in Latin, and was an accomplished musician. The task of teaching young Benedict generally fell to her; and as a consequence the pupil soon became in love with the master. We often picture this courtship to ourselves, as a sort of odd reverse of Abelard and Heloise. Spinoza, we fancy, not inattentive to the instruction, but the more in love with it coming from so soft a mouth—not inattentive, yet not wholly absorbed. He watches her hand as it moves along the page, and longs to squeeze it. While "looking out" in the dictionary, their hands touch—and he is thrilled; but the word is *found*, nevertheless. The lesson ended, he ventures on a timid compliment, which she receives with a kind smile; but the smile is lost, for the bashful philosopher has his eyes on the ground; when he raises them, it is to see her trip away to household duties, or to another pupil, and he looks after her, sighing. But, alas for maidenly discernment! our female Abelard was more captivated by the showy attractions of a certain Kerkering, a young Hamburg merchant, who had also taken lessons in Latin and love from the fair teacher; and who, having backed his pretensions by the more potent seductions of pearl necklaces, rings, &c., quite cast poor Benedict into the shade. He then turned from love to philosophy.

His progress in Latin had, however, been considerable; he read it with facility, and found it invaluable in his philosophical studies; and especially as the works of Des Cartes now fell into his hands, which he studied with intense avidity, feeling that a new world was therein revealed. The laws of the ancient Jewish doctors expressly enjoin the necessity of learning some mechanical art, as well as the study of the law. It was not enough, they said, to be a scholar—the means of subsistence must also be learned. Spinoza had accordingly, while belonging to the synagogue, learnt the art of polishing glasses for telescopes, microscopes, &c., in which he arrived at such proficiency that the great Leibnitz, writing to him, mentioned, "Among the honourable things which fame has acquainted me with respecting you, I learn with no small interest that you are a clever opician." By polishing glasses he gained a subsistence—humble, it is true, but equal to his wants. To this he joined, by way of relaxation, the study of design, and soon became very expert. Colérus had a portfolio of portraits of several distinguished men, sketched by him; and one among them was a portrait of himself, in the dress of Masaniello.*

In his eight-and-twentieth year Spinoza left his natal city of Amsterdam, and resolving to devote his life to study, retired to Rhynsburg, near Leyden, were still pursuing his trade as a glass polisher, he devoted every spare hour to philosophy. The fruits of his solitude were the "Abridgment of the Meditations of Des Cartes," with an appendix, in which he first disclosed the principal points of his own system. This is a very interesting work. It contains the most accurate and comprehensible account of Des Cartes we have ever met with; and the appendix is curious, as containing the germs of the "Ethica." It made a profound sensation; and when, the following year, he removed to Woorburg, a small village near the Hague, his reputation attracted him a great concourse of visitors. Many enmities were excited amongst the disciples of Des Cartes, by the exposition of the weak points of their master's system; and Spinoza had to suffer their rude attacks in consequence—but the attention of all thinking men was fixed upon him, and the clearness and precision of his work won him their admiration. So many new friendships did he form, that he at last yielded to the numerous solicitations that he should come and live entirely at the Hague. It was not the learned alone who sought his friendship—men of rank in public affairs were also numbered amongst them. Of the latter we may mention the celebrated Jan de Witt, who loved Spinoza, and profitted by his advice in many an emergency. The great Condé also, during the invasion of Holland by the French, sent to desire Spinoza to come and see him. The philosopher obeyed, but the prince was prevented keeping his appointment—to his loss. This journey was very near proving fatal to Spinoza. The populace having learned that he had been in communication with the enemy, began to suspect him of being a spy. His landlord, alarmed at these reports, warned him of them; he feared, he said, that the populace would attack the house. "Fear nothing," replied Spinoza, calmly. "It is easy for me to justify myself, and there are persons enough who know the object of my journey; but whatever may arrive, as soon as the people assemble before your door, I will go out and meet them, even though I should share the fate of De Witt." The same calm courage which made him proclaim the truth, now made him ready to confront

*"Your enemies have not failed to say that you pretend by it to show that you would make in a little time of christianity, as complete an upset as Masaniello made of Naples in fifteen days."—*Discussion of Bayle with Spinoza upon another world*, Cologne, 1711.

the infuriated populace. Fortunately all passed off in peace, and he was left to his studies. Karl Ludwig, anxious to secure so illustrious a thinker, offered him the vacant chair of philosophy at Heidelberg, which, however, Spinoza could not accept, conscious that the philosophy he would teach was too closely allied to theology, not to trench on its dogmas; and the Elector had expressly stipulated that he should teach nothing which could prejudice the established religion. He therefore begged to decline it, as his public duties would interfere with his private meditations. Yet it was both a lucrative and honourable post he refused; but a philosophical contempt for worldly honours was amongst his characteristics.

It is invigorating to contemplate Spinoza's life. Dependent on his own manual exertions for his daily bread, limited in his wants, and declining all pecuniary assistance so liberally offered by his friends, he was always at ease, cheerful, and occupied.

There is an heroic firmness traceable in every act of his life, worthy of our meditation—there is a perpetual sense of man's independence, worthy all imitation. He refuses to accept the belief of another man—he will believe for himself—he sees mysteries around him—awful, inexplicable—but he will accept of no man's explanation.

Thus he leaves the synagogue—thus also he leaves Des Cartes—thus he thinks for himself. So in a far subordinate sphere he will assert his independence. Having but the most miserable pittance, and with the purses of his friends open to him, he preferred limiting his desires, to accepting their bounties. He preferred working, and gaining his own subsistence, so long as it was to be gained. This was no crotchet of his—neither was it ignoble calculation. The friends were sincere, their offers were sincere—he knew it, but thanked them, and declined. The heritage, which on his father's death fell to his lot, he resigned to his sisters. The large property which his friend Simon de Vries had announced his intention of leaving him, he would not consent to accept—but made Simon alter his will in favour of his brother De Vries, at Schiedam. The pension offered him, if he would dedicate his next work to Louis XIV., he refused, "Having no intention of dedicating anything to that monarch." Whilst he had talents, and energy to make them available, he would not rot in idleness, or in ignoble dependence, while all the world had to toil! *

Yet it was a hard, griping poverty that he endured. On looking over his papers, after his death, they found accounts of his expenditure. One day he eat nothing but a milk soup, with a little butter, which cost about three halfpence, and a pot of beer, which cost three farthings more. Another day he lived on a basin of gruel, with some butter and raisins, which cost him twopence halfpenny—and, says the pastor Colérus—"Although often invited out, he liked better to live on what he had at home, however little it was, than to have a good table at the expense of another."

His contemporaries justly entitled him an atheist, but it is extraordinary how they could charge him with being an epicure, in a bad sense, when he lived on twopence halfpenny per day.

The publication of his "Tractatus Theologico-Politicus," was an event of some importance, both in the history of philosophy and of Spinoza. The state of men's minds, at that period, was not favourable to the reception of any great philosophical system—and Spinoza found himself obliged to prepare the way for his future doctrines, by examining the nature of that ecclesiastical power which could excite at will such violent perturbation in the state—and by examining also the foundations on which that power reposed. This great question still agitates mankind—and it is as curious as instructive to observe that the late orthodox Dr. Arnold taught a doctrine precisely similar to that taught by the reviled and persecuted Spinoza.*

Times were troubled. Holland was reposing on her laurels, won in the long and desperate struggle against Spain. Having freed herself from a foreign yoke, she had, one would fancy, little now to do but complete her canals, extend her commerce, and enjoy her peace. But, oh, the glorious contradictions in human history! This land of political freedom—this ark of refuge for the persecuted of all nations—the republic whose banner was freedom, and in whose cities European freethinkers published their works—was itself disturbed by theological faction.

The persecuted Jews might flock from Spain and Portugal—the synagogue might rear itself beside the church—the protestants of France and Belgium were welcomed as brothers and citizens—but arrived there, the fugitives might witness, even there, the implacable war of party. Toleration was afforded to political freethinking, and to the diversities of religion; but, within the pale of the state-religion, malice and all uncha-

* It was in a man's own energy that he saw the germ of worth and greatness, and wisely ridiculed the notion of patronage in this noteworthy passage: "Governments should never found academies, for they serve more to oppress than to encourage genius. The unique method of making the arts and sciences flourish, is to allow every individual to teach what he thinks at his own risk and peril."—*Tract. Polit.*, c. 8, §. 49.

* Compare Arnold. "Introductory Lectures on Modern History." Appendix to the first lecture.

ritableness were daily witnessed. There the gomarists and arminians disputed concerning the infallibility of their doctrines, and cloaked their political ambition under evangelical protestations.

This was the state of things on the appearance of the "Tractatus." Spinoza, seeing the deplorable dissensions of the theologians, endeavoured to make evident the necessity of a state religion, which without absolutely imposing or interfering with private creeds should regulate all outward observances. Because as it is the office of the state to watch over all that concerns the common welfare, so should it watch over the church, and direct it according to the general wish. But two things perfectly distinct must not here be confounded, namely, liberty of observance and liberty of thought. The latter is independent of all civil power; but the former must be subject to it, for the sake of the public tranquillity.

Although this portion of the "Tractatus" could not have met with general approbation, yet it would scarcely have raised violent dissensions, had Spinoza confined himself to such speculation; but, anticipating the rationalism of modern Germans, he undertook a criticism of the bible, and attacked the institution of preisthood as injurious to the general welfare. The consequences were as might have been expected; the book was at once condemned, and forbidden to be received in almost every country. This, as usual, only gave a greater stimulus to curiosity, and the sensation the work produced may be judged of by the quantity of "refutations" which appeared. Many were the artifices used to introduce it into the various countries.

Spinoza's devotion to study, with its concurrent abstemiousness and want of exercise, soon undermined his constitution; but he never complained. He suffered that, as he had suffered every thing else—in silence. Once only a hint escapes him. "If my life be continued," he writes to a friend respecting a promise to explain certain matters. No plaint—no regret—merely a condition put upon a promise. He was a calm, brave man; he could confront disease and death, as he had confronted poverty and persecution. Bravery of the highest kind distinguished him through life, and was not likely to fail him on the quitting it; and yet beneath that calm, cold stoicism, there was a childlike gaiety springing from a warm and sympathising heart. His character was made up of generous simplicity and heroic forbearance. He could spare somewhat from even his scanty pittance to relieve the wretched. He taught the learned world the doctrines he had elaborated with endless toil, but it suited his political caution and easiness of disposition never to interfere with the religious observances of society.

So lived the Jew, Spinoza. So he developed his own nature, and assisted the development in others. Given up to philosophy, he found in it "its own exceeding great reward." His only relaxations were his pipe, receiving visitors, chatting to the people of his house, and watching spiders fight. This last amusement would make the tears roll down his cheeks with laughter.

The commencement of the year 1677 found him near his end. The phthisis, which he had suffered from for twenty years, now alarmingly increased. On Sunday, the 22nd February, he insisted on his kind host and hostess leaving him, and attending divine service, as he would not permit his illness to obstruct their devotions. They obeyed. On their return he talked with them about the sermon, and ate some broth with a good appetite. After dinner his friends returned to church, leaving the physician with him. When they came home they learnt, with sorrow and surprise, that he had expired about three o'clock, in the presence of the physician, who seized what money there was on the table, together with a silver-handled knife, and left the body without further care. So died, in his forty-fifth year, in the full vigour and maturity of his intellect, Benedict Spinoza.

The purely metaphysical portion of his system had few adherents until the modern German speculators proclaimed his greatness; but since Jacobi, Lessing, Herder, and Goethe, there has been no Leipsig fair that has not shown its essay for or against Spinoza; and three or four translations of his works already exist. In France he has also lately attracted some attention, and from influential quarters. In England a few solitary students have gratefully acknowledged his excellence; but the regular professors, such as Reid, Stewart, Brown, Sir James Mackintosh, Mill, &c., make no pretension to an acquaintance with him. Their mention of him is confined to his atheism. Yet there are few names in the history of philosophy more worthy of a serious consideration.

To understand Spinoza it is absolutely necessary to understand his master, Des Cartes; it is not only indispensable, therefore, that we should give a brief characteristic of the philosophy of the latter, but it will also be the shortest and readiest introduction to our exposition. Almost simultaneously with Bacon, in England, did Des Cartes, in Holland, commence a reform in philosophy. Both were disgusted with the vain sciences and verbal subtleties which then infested the learned world; both were strongly impressed with the conviction that their predecessors and contemporaries were pursuing a wrong method; and both set themselves to the introduction of a new one. How Bacon attempted this the world knows. How did Des Cartes attempt it?

The Reformation (which was the vehement protest of mankind that authority was no longer the grounds of belief, but that reason alone could claim that title) had stirred all minds to new and vigorous action; and the philosophy of Des Cartes is the most striking product of the newly-enfranchised reason. Dissatisfied both with the scepticism and dogmatism he saw around him; unable to find firm ground in any of the prevalent systems; distracted by doubts of everything high and low, holy or trivial; mistrusting the conclusions of his own understanding, and seeing that his own senses often deceived him, he resolved to make a *tabula rasa*, and reconstruct his knowledge. He resolved to examine the pretentions of every conclusion, and to believe nothing but upon the clear evidence of his reason. He began by universal doubt. He not only cleared his mind of all its previous stock of opinions, but pushed his doubts to the very verge of self-annihilation. There he stopped; there in self—in his own consciousness—he found an irresistible fact, an irreversible certainty. He could doubt the existence of the external world, and treat it as a phantasm; he could doubt the existence of god, and treat it as a superstition; but of the existence of his thinking, doubting mind, no doubt was possible. He, the doubter, existed, if nothing else existed. Hence his world-famous *cogito, ergo sum:* I think, therefore I am.

I exist. No doubt can darken such a truth; no sophism can confuse this foundation of all possible knowledge. This is a certainty, if their be none other; this is the starting point and basis of all science. But whence this certainty?—from *consciousness.* Consciousness, then, is the basis of all truth —there is none other possible. Interrogate consciousness, and its clear replies will be science. On examining my consciousness with this view, I find that not only do I exist, but that I am miserably finite and imperfect. By my finitude, therefore, I am conscious of not being the all; by my imperfection of my not being the best. Yet an infinite and perfect being must exist, for infinity and perfection are *implied* as co-relations to my *ideas* of finitude and imperfection. The infinite and perfect can be none other than god. God therefore exists; his existence is clearly proclaimed in my consciousness, and can no more be a matter of doubt than can my own existence.

God, being perfect, cannot deceive us; it is we who deceive ourselves, by taking vague and confused ideas for clear and true ones. To guide us in the pursuit of truth these four rules are indispensable:

1. Never to accept anything as true but what is evidently so; to admit nothing into the mind but what so clearly and distinctly presents itself as true that there can be no reason to doubt it — (Independance of authority).

2. To divide every question into as many separate questions as possible; that each part being more easily conceived, the whole may become more intelligible—(Analysis).

3. To conduct the examination with order, beginning by that of objects the most simple and therefore the easiest to be known, and ascending little by little up to knowledge of the most complex—(Synthesis).

4. To make such exact calculations, and such circumspections, as to be confident that nothing essential has been omitted.

Thus did Des Cartes, from the ground of consciousness, reconstruct the belief in his own existence, and in the existence of god and of the world. It was a great scheme, and in his day an important one. Amidst the chaos of opinions a ground of certainty was needed; DesCartes found one, or thought he did, in consciousness.

The reader will appreciate the effect of Des Cartes' writings on Spinoza when they fell into his way, especially if he recalls the critical period at which Spinoza first met with them. He was then striving to solve for himself the inexplicable riddle of the universe. He had penetrated deep into the science of the cabbala; he had been assisted by the learned Morteira; but wise in all the wisdom of the Jews, he was still at an immeasurable distance from the desired solution. Des Cartes captivated him no less by the boldness of his logic than by the independent nature of his method, which sought truth in the inner world of man, and not in the outward world, nor in the records of authority. He studied with avidity; but he soon found that there also the riddle remained unsolved. He found the fact of his own existence superfluously demonstrated; but the far greater existence in which his own was included—of which the great all was but a varied manifestation—of this he could find no demonstration. *Cogito, ergo sum* (I think, therefore I am) is irresistible, but *cogito, ergo deus est* (I think, therefore god exists) is no syllogism. The solution of the problem of the τὸ ὄν καὶ τὸ ἕν— "the one alone, by reason of which all else exists," had still to be discovered.

Spinoza leaving Des Cartes, asked himself —What is the *noumenon* (thing known) which lies beneath *phenomena* (things experienced)? We see everywhere transformations perishable & perishing; yet there must be something beneath which is imperishable—what is it? We see a wondrous universe peopled with wondrous beings, yet none of these beings exist *per se* (by themselves), but *per aliud* (by another): they are not the authors of their own existence —they do not rest upon their own reality, but on a greater reality—on that of the τὸ ἕν, καὶ

τὸ πᾶν—"the one alone, which bears or brings forth." What is this reality?

This question, successively asked by every thinker, and to which philosophy has only stammered forth replies—from the "water" of Thales to the "absolute" of Hegel—this question, Spinoza thought, could not be answered by the idea of perfection. No: the great reality of all existence is substance. Not substance in the gross and popular sense of "body" or "matter," but that which is *substans*—which is standing under all phenomena, supporting and giving them reality. What is a phenomenon?—an appearance, a thing perceived, a state of the perceiving mind. But what originates this perception — what changes the mind from its prior to its present state? *Something*, external and extrinsic, changes it. What is this something? What it *is*, in itself, we can never know—because to know it would bring it under the forms and conditions of the mind, that is, would constitute it a phenomenon—unknown, therefore, but not denied—this *ens*—this something *is*; and this Kant calls *noumenon*. This Spinoza calls substance.

All science, as all existence, must start from *one* principle, which must be the ground of all. What is this commencement —this ἀρχη (principium, beginning)? Perfection, replies Des Cartes. No, says Spinoza, perfection is an attribute of something prior to it. Substance is the "beginning." Des Cartes, in common with most philosophers, had assumed a duality—he had assumed a god and a real world created by god. Substance, to him, was by no means the primal fact of all existence; on the contrary, he maintained that both extension and thought were substances; in other words, that mind and matter were distinct independent substances, different in essence, and united only by god. Spinoza affirmed that both extension and thought were no more than attributes; and by a subtle synthesis he reduced the duality of Des Cartes to his own all-embracing unity, and thus arrvied at a conception of *the one*.

Such was Spinoza's solution of the problem —upon this he felt he could repose in peace, and upon this only. To live with, and know this sort of god, as far as he could, was the highest point of human development and happiness; and to this he consecrated his life. Taking the words of Paul, "In him we live, move, and have our being," as his motto, but in a different sense, he sought to trace the relations of the world to man, and those of man to society. His "Tractatus" and "Ethica," were the great results of that endeavour.

Having mastered this first principle of all science, he proceeded to demonstrate it; and very properly adopted the method of the mathematicians. To this demonstration we are about to lead our readers, and only beg of them a little steady attention and a little patient thought, convinced that they will then have little difficulty in finding their way in this abstrusest of all subjects. We shall translate some portion of the Ethica with the utmost care, because we think it every way advisable that the reader should have Spinoza's own mode of statement, and thereby be enabled to watch his method of deducing his conclusions from his premises. The work opens with eight

DEFINITIONS.

I. By cause of itself I understand that, the essence of which involves existence; or that, the nature of which can only be considered as existent.

II. A thing finite is that which can be limited *(terminari potest)* by another thing of the same nature, *ergo*, body is said to be finite because it can always be conceived as larger. So thought is limited by other thoughts. But body does not limit thought, nor thought limit body.

III. By substance I understand that which is in itself, and is conceived *per se*, that is, the conception of which does not require the conception of anything else as antecedent to it.

IV. By attribute I understand that which the mind perceives as constituting the very essence of substance.

V. By modes I understand the accidents *(affectiones)* of substance; or that which is in something else, through which also it is conceived.

VI. By god I understand the being absolutely infinite; that is, the substance consisting of infinite attributes, each of which expresses an infinite and eternal essence.

Explication. I say absolutely infinite, but not *in suo genere;* for to whatever is infinite but not *in suo genere*, we can deny infinite attributes; but that which is absolutely infinite, to its essence pertains everything which implies essence, and involves no negation.

VII. That thing is said to be free which exists by the sole necessity of its nature, and by itself alone is determined to action. But that is necessary, or rather constrained, which owes its existence to another, and acts according to certain and determinate causes.

VIII. By eternity I understand existence itself, in as far as it is conceived necessarily to follow from the sole definition of an eternal thing.

AXIOMS.

First. Every thing which is, is in itself, or in some other thing.

Second. That which cannot be con-

ceived through another, *per aliud*—must be conceived, *per se*.

Third. From a given determinate cause the effect necessarily follows; and *vice versa*, if no determinate cause be given no effect can follow.

Fourth. The knowledge of an effect depends on the knowledge of the cause, and includes it.

Fifth. Things that have nothing in common with each other, cannot be understood by means of each other, that is, the conception of one does not involve the conception of the other.

Sixth. A true idea must agree with its original in nature.

Seventh. Whatever can be clearly conceived as non-existent, does not in its essence involve existence.

PROPOSITIONS.

I. Substance is prior in nature to its accidents.

Demonstration. Per definitions 3 and 5.

II. Two substances, having different attributes, have nothing in common with each other.

Dem. This follows from def. 3; for each substance must be conceived in itself and through itself; in other words, the conception of one does not involve the conception of the other.

III. Of things which have nothing in common, one cannot be the cause of the other.

Dem. If they have nothing in common, then (per axiom 5) they cannot be conceived by means of each other; *ergo* (per axiom 4), one cannot be the cause of the other. —Q.E.D.

IV. Two or more distinct things are distinguished among themselves, either through the diversity of their attributes, or through that of their modes.

Dem. Everything which is, is in itself, or in some other thing (per ax. 1), that is (per def. 3 and 5), there is nothing out of ourselves (*extra intellectum*, outside the intellect) but substance and its modes. There is nothing out of ourselves whereby things can be distinguished amongst one another, except substances, or (which is the same thing, per def. 4) their attributes and modes.

V. It is impossible that there should be two or more substances of the same nature, or of the same attribute.

Dem. If there are many different substances, they must be distinguished by the diversity of their attributes or of their modes (per prop. 4). If only by the diversity of their attributes, it is thereby conceded that there is nevertheless only one substance of the same attribute; but if by their diversity of modes, then substance being prior in order of time to its modes, it must be considered independent of them; that is (per def. 3 and 6), cannot be conceived as distinguished from another; that is (per prop. 4), there cannot be many substances, but only one substance.—Q.E.D.

VI. One substance cannot be created by another substance.

Dem. There cannot be two substances with the same attributes (per prop. 5); that is (per prop. 2), that have anything in common with each other; and therefore (per prop. 3) one cannot be the cause of the other.

Corollary 1. Hence it follows that substance cannot be created by anything else. For there is nothing in nature except substance and its modes (per axiom 1, and def. 3 and 5); now this substance not being produced by another is self-caused.

Corollary 2. This proposition is more easily to be demonstrated by the absurdity of its contradiction—for if substance can be produced by anything else, the conception of it would depend on the conception of the cause (per axiom 4), and hence (per def. 3), it would not be substance.

VII. It pertains to the nature of substance to exist.

Dem. Substance cannot be produced by anything else (per coroll. prop. 6), and is therefore the cause of itself; that is (per def. 1), its essence necessarily involves existence; or it pertains to the nature of substance to exist.—Q.E.D.

VIII. All substance is necessarily infinite.

Dem. There exists but one substance of the same attribute; and it must either exist as infinite or finite. But not finite, for (per def. 2) as finite it must be limited by another substance of the same nature, and in that case there would be two substances of the same attributes, which (per prop. 5) is absurd. Substance therefore is infinite.—Q.E.D.

(Compiled from "Spinoza's Life and Works." By G. H. Lewes, Esq., first published in the "Westminster Review.")

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No. IV. ONE PENNY.

ON THE SUPPOSED NECESSITY OF DECEIVING THE VULGAR.

BY JULIAN HIBBERT.

THE reception of a certain maxim, is, I think, the principal cause why superstition, though occasionally written against, and partially (or at any rate, nominally) condemned, is yet able to exist and to flourish. We may indeed attribute a great part of the success of superstition to the principles of fear, ideality, and wonder, inherent in the human mind—to the influence of educations formed by brutish nurses and dogmatical pedagogues—and to the excitement occasioned by the gloomy prophecies and furious denunciations of pulpited hypocrites. But the grand support of superstition is from those whose great interest it is to put down superstition. *Physicians*, *historians*, *legislators*, *school-masters*, *newspaper-editors*, and *political economists*, are the most enlightened and useful of literati—and, if properly united, for their own (the public) benefit, might rule the world. Yet do these very men (who, in a land of perfect superstition, would for the most part be annihilated) uphold and protect their arch-enemy, by maintaining the fatal maxim—that *it is necessary to deceive the vulgar.*

It would be superfluous to show how much ancient *priests* followed this maxim, in keeping for themselves sublime doctrines, while they fed the people with fables. This is sufficiently well known, especially as regards the Egyptians. But even legislators condescended to use these tricks. Diodorus Siculus, after mentioning that Mneues, the first mortal legislator among the Egyptians, pretended to derive his laws from Hermes, adds: "Similarly, it is said, that of the Grecians, Minos in Crete, and Lycurgus (1) in Lacedæmon, gave out that they had derived their laws, the one from Jupiter, and the other from Apollo. And among most other nations it is reported, that this maxim obtained, and was a cause of great advantages to the believers. For it is related, that, among the Arimaspians, Zathraustes feigned that he had received his laws from the agatho-dæmon, or good demon; as, among those who are called Getæ, Zamolxis feigned that he had received his from the great goddess of their republic, Vesta; and as, among the Jews, Moses (2) feigned that he had received his from a god called Iao — either judging that an idea which was to be useful to a multitude of men, was altogether divine and wonderful—or considering that the vulgar would be more obedient, when contemplating the power and magnificence of those who were said to have promulgated the laws."

Thus Diodorus—to whose list of divinely-commissioned legislators may, I think, be added some other Grecians, namely, Triptolemus (if there was such a person), the missionary of Ceres—Zaleucus, who was assisted by Minerva—and Solon, who availed himself of the sanctity of Epimenides.

But the great chief of deceptive legislators was Pythagoras, whose followers, to the latest ages, appear to have delighted in working miracles. The platonists, also (or rather Plato himself, and the neo-platonicians, as distinguished also from that sceptical sect the academics), seem to have been fond of mysterious imposture (3). The stoics were hypocritical and dogmatical.

Euripides said, that, in the early state of society, some wise man insisted on the necessity of darkening truth with falsehood, and of persuading men that there is an immortal deity (4), who hears, and sees, and understands our actions.

The eristic philosopher Stilpo, as also Bion, the Borysthenite, when asked, in the street, concerning the gods, replied, that they could not speak upon that subject where the vulgar could hear them.

Strabo shows, at great length, the general use, and important effects, of theological fables: "It is not possible for a philosopher to conduct, by reasoning, a multitude of women and of the low vulgar—and thus to invite them to piety, holiness, and faith. But he must also make use of superstition—and not omit the invention of fables, and the performance of wonders. For the lightning, and the ægis, and the trident, and the thyrsolonchal arms of the gods, are but fables—and so is all ancient theology. But the founders of states adopted them as bugbears to frighten the weak-minded."

The deep policy of the Romans, in religiously deceiving the vulgar, is well known.

Thus Numa (if there ever was such a person) pretended to derive legislative information from the goddess Egeria: "Lest the dispositions of the people should, in time of tranquility, grow licentious, he made it his first aim to inspire them with fear of the gods, a principle of the greatest efficacy with the multitude, in that rude and ignorant age.

And as this did not seem likely to make much impression on their minds, without the aid of some pretended miracle, he made them believe that he had nightly meetings with the goddess Egeria—and that by her direction he instituted the sacred rites most acceptable to the gods, and appointed proper priests for each of the deities." Thus Livy. And Plutarchus, after requiring us to believe that Zaleucus, Minos, Zoroaster, Numa, and Lycurgus, were visited by the deity, says of them, that: "For I am not averse to thinking what certain authors have said, that Lycurgus, Numa, and several other celebrated personages, having to conduct a rustic people, difficult to manage, and wishing to make them adopt great changes, have imagined this communication with the gods, for the good even of those whom they made believe it." And further on we read of Numa alone: "He called superstition to his assistance... ....Sometimes even he presented to them, on the part of the gods, motives of terror(5); he announced to them strange visions, menacing voices that he had heard; and by that means he accomplished his object of making them yield entire submission to, and bend under the yoke of, superstition (6)."

The hone-cutting-razor-miracle, achieved by Tarquinius Priscus and Attius Navius, was probably got up for political purposes.

The dictator Camillus was a very religious man—his speech to the Romans, after the Gauls had retired, principally turns upon the importance of the national religion—and the military tribunes created by him "Consulted the senate on no other business previous to that which related to religion. They ordered, in the first place, that a collection should be made of the treaties and laws which could be found. The latter consisted of the twelve tables, and some laws enacted by the kings. Some of these were publicly promulgated—but such as related to religious matters were kept secret, chiefly through means of the pontiffs, that they might hold the minds of the multitude in bondage, under the ties of religion." (Livy.)

The elder Scipio Africanus constantly pretended to be peculiarly favoured by the gods. Thus he took care frequently to go alone to the capitol, where the vulgar imagined that he received some revelation from the deity. Polybius praises this policy, and compares it to that of Lycurgus.

The pontifex-maximus Scævola thought it expedient that the people should be deceived in religion—and the learned Varro said plainly, that there are many truths, which it is useless for the vulgar to know—and many falsities which it is fit the people should not suppose are falsities. Hence comes the adage, "The world will be deceived—let it be deceived then."

The religious policy of the Roman government, especially in later times, is inimitably described in the following passages of Gibbon: "The various modes of worship, which prevailed in the Roman world, were all considered—by the people, as equally true—by the philosopher, as equally false—and by the magistrate, as equally useful..... Notwithstanding the fashionable irreligion which prevailed in the age of the Antonines, both the interests of the priests and the credulity of the people were sufficiently respected. In their writings and conversation, the philosophers of antiquity asserted the independent dignity of reason: but they resigned their actions to the commands of law and of custom. Viewing, with a smile of pity and indulgence, the various errors of the vulgar, they diligently practised the ceremonies of their fathers, devoutly frequented the temples of the gods, and sometimes condescending to act a part on the theatre of superstition, they concealed the sentiments of an atheist under the sacerdotal robes. Reasoners of such a temper were scarcely inclined to wrangle about their respective *modes* of faith, or of worship. It was indifferent to them what *shape* the folly of the multitude might choose to assume; and they approached, with the same inward contempt, and the same external reverence, the altars of the Lybian, the Olympian, or the Capitoline Jupiter."

After mentioning the opinions of those most enlightened Pagans, the Grecians and Romans, it is scarcely necessary to show how much the doctrine of deceit was practised by less free-minded polytheists. I will only give the following well-known instance. The Indian sophist Xekia (7), when on his death-bed, delivered to his disciples his secret dogmata, adding that they should abandon the exoteric doctrine to the people, and themselves, at any rate, only conform to it outwardly.

But let us pass over the benighted heathens, whose religion was, no doubt, that of the father of lies—and let us come to the religion of light and truth.

Paul of Tarsus seems to have imagined that the deity could occasionally deceive the people, for he says (8): "God shall send them strong delusion, that they should believe a lie; that they all might be damned (9) who," &c. (See also Epis. to the Romans.)

Concerning the christians of the first centuries, I will give the following passage from Dr. Mosheim: "The platonists and pythagoreans held it as a maxim, that it was not only lawful, but praiseworthy, to deceive, and even to use the expedient of a lie, in order to advance the cause of truth and piety. The Jews who lived in Egypt, had learned and received this maxim from them, before the coming of Christ, as appears incontestably from a multitude of an-

cient records; and the christians were infected from both these sources with the same pernicious error, as appears from the number of books attributed falsely to great and venerable names——." Thus Dr. Mosheim—who, however, attributes most of these pious frauds to the heretics, not to the genuine christians—and it is piously to be hoped that he is right.

The above paragraph refers to the second century after Christ—but, in the fourth century, it was an almost universally-adopted maxim, "That it was an act of virtue to deceive and lie, when, by such means, the interests of the church might be promoted." I will only give one more quotation from Mosheim (it regards the fifth century): "The simplicity and ignorance of the generality in those times, furnished the most favourable occasion for the exercise of fraud; and the impudence of impostors, in contriving false miracles, was artfully proportioned to the credulity of the vulgar; while the sagacious and the wise, who perceived these cheats, were over-awed into silence by the dangers that threatened their lives and fortunes, if they should expose the artifice. Thus does it generally happen in human life, that, *when danger attends the discovery, and the profession of the truth, the prudent are silent, the multitude believe, and impostors triumph.*"

After giving these extracts from so learned a theologian, it is unnecessary for me to mount up to the fountain head, and to turn over the heavy folios of the fathers of the church, of which, indeed, I possess but very few. However, I will give the following passages:

The apostolic Hermas says: "I never spoke a true word in my life; but always lived in dissimulation, and affirmed a lie for truth to all men; and no man contradicted me, but all gave credit to my words (10)."

The author of the Clementina has impiously dared to introduce even St. Peter himself, telling the father of Clemens, to put on the appearance of Simon Magus, and, as such, to confess that he had wickedly lied against Peter. Dr. Mosheim is very severe upon the delusion. Elsewhere, St. Peter is made to speak very strangely about the lies of scripture. (Homil. Clement.)

St. Clemens Alexandrinus seems to me decidedly favourable to pious frauds. For, after referring to Saint Paul, &c., Clemens says: "They are not liars, who accommodate themselves according to economy of salvation, nor who err in any things which are in part; but those [are liars] who stumble at principal things, and who reject the lord....and the lord's true doctrine."

St. Cyprianus tells us that it is dangerous to speak the truth concerning god (11).

St. Gregorius Nazianzenus was of opinion, that words are sufficient to deceive the vulgar, who admire the more the less they understand (12). According to the same doctor of the church: "Our fathers and teachers have often said, not what they thought, but what circumstances required."

St. Hieronymus, though he condemns Origen's doctrine of deceitfulness, nevertheless declares, that the fathers were obliged to say, not what they thought, *but every thing requisite to refute what the heathens believed.* He endeavours to vindicate them by the example of St. Paul—but Blondel has shown the insufficiency of such a justification.

St. Chrysostomus declares, "That miracles are proper only to excite sluggish and vulgar minds; that men of sense have no occasion for them; and that they frequently carry some untoward suspicion along with them (13)." Elsewhere, Chrysostomus maintains that a certain degree of deceitfulness "Is honourable—not only in war and towards enemies, but also in peace and towards friends." He then talks about the conduct of St. Paul. Afterwards he says: "Great is the force of deceit, provided it be not excited by a treacherous intention. And such as this, indeed, ought not to be called deceit, but a certain economy and wisdom. ....He is justly called a deceiver, who uses the method unjustly, not he who does this with a sane mind. It is often useful to deceive, and thus to give great assistance."

Eusebius (who, though a sort of an arian, was the most useful man christianity ever possessed) seems to have been rather actuated by the principle of deceit, when he composed his ecclesiastical history. If we subtract falsifications, interpolations, and evident improbabilities, his account of the christians, during the first century of their era, amounts to little more than what we read in (that undateable, but highly-to-be-reverenced, compilation, ycleped) the new testament. Gibbon says of our grand historian: "Eusebius indirectly confesses that he has related whatever might redound to the glory, and that he has suppressed all that could tend to the disgrace, of religion."

After speaking of the christians who first endeavoured to give a methodical, and something like common-sense, account of the origin of his religion, I may add the avowal of Sozomenes, another of our christian historiographers, that he did not dare to relate the creed of Nice, because "some of his pious and learned friends in this matter," advised him to suppress the things, "Which the initiates and mystagogues alone should understand"—and that, according to their advice, he has concealed what was to be kept silent.

I will only refer to one more of the ancient churchmen, namely to Synesius. This demi-philosopher, on being offered the bishoprick of Ptolemaïs, wished his patriarch to be in-

formed, that, although he could not believe the common doctrine of the resurrection, yet *he had no objection to amuse the vulgar with fables.* "As darkness suits the blear-eyed better than light, so I think that falsehood suits the vulgar better than truth." The liberal theologian Beausobre, after quoting various parts of this famous epistle, says: "One sees in the history that I have related, that which has, perhaps, been only too common in all ages. It is the ease, that ecclesiastics, not only do not say what they think, but say the contrary of what they think. Philosophers in their studies—out of them they relate fables, although they know well that they are fables. *They do more, they deliver up to the executioner good men, for having said it.* How many atheists and infidels have burnt holy persons under the pretext of heresy! Every day hypocrites consecrate and have worshipped the host, although convinced, as well as I am, that it is only a bit of bread."

A famous medical metaphysician has ventured to say, of the early christian priests: "Nothing was more obnoxious to all their enterprises, than the pagan philosophers as well as historians, and the good sense contained in their works. *Knowledge is the bane of priestcraft;* which made some prelates, as soon as it was in their power, behave themselves against all human literature, and everything belonging to arts and sciences, with an uncommon rage....The inveteracy of Gregory the Great against learning and paganism was so excessive, that he not only was angry with an Archbishop of Vienna, for suffering grammar to be taught in his diocese, but studied to write bad Latin himself; and in one of his letters boasted, that he scorned to conform to the rule of grammar, not in any thing to resemble a heathen. In pursuance of this refined policy, the clergy has refused to recede an inch from what had been gained on the credulity of the laymen; and whoever attempted to undeceive the people was always looked upon as a false brother, and rendered odious to the world." Thus Mandeville—who protests that he does not allude to latter times. And I am sure he would not, if alive, allude to this nineteenth century—for we see that our clergy has established everywhere schools of mutual instruction—as soon as it was found, that, otherwise, the education, or rather the bible-teaching (14), of the poor would fall into the hands of the dissenters.

When such as I have above stated were the doctrines of some of the fathers of the church (15), it is not surprising if their lineal descendants, the roman catholics (16), have perpetually acted upon the principle of deceit. Hence the 11,000 virgin martyrs of Cologne—hence the two or three heads of St. Ursula—hence the girdle of the virgin Mary, shown in eleven different places—hence the eight authenticated sindoni, or cerements, of our blessed saviour—hence enough wood of the true cross to build a first-rate man of war. To this doctrine of deceit we owe the most stupendous forgeries, such as letters from the virgin Mary, &c.—and the perpetual succession of miracles, such as the still annually liquified blood of St. Januarius. No wonder if the priests ridicule, when by themselves, that ignorance by which they live, and if Leo X. should be reported to have said, "*What riches this fable of Christ has brought us!*"

But from the second (or at any rate, the third) century of our era, down to the sixteenth, we know that christianity was not christianity—and that the church, against which the powers of darkness were not to prevail, was in a perfect state of eclipse. When, however, the invention of printing (17) had begun to popularise knowledge—and when Luther, aided by the Saxon princes, had overthrown the papal power in the north of Germany—and those time-servers, Cromwell and Cranmer, had revolutionised the religion of England—then (evidently by the grace of god alone) christianity shone forth in its virgin splendour. Yet, even since this auspicious renovation, how many English priests have (as is said to have been the case with Archbishop Sheldon) regarded religion as a state-mystery! For I regret to say, our prelates are sometimes more endued with reason than with faith. Thus, Archbishop Tillotson was suspected of latitudinarianism—Bishop Hoadly has been called the greatest dissenter that ever was preferred in the church—and Bishop Hare has been accused of having even offered to bet against the prophecies.

Almost in our own times, Bishop Watson, notwithstanding his two apologies, has, I am told, acknowledged, in his Memoirs, that his own faith, as regards the soul, was not perfectly sound. Dr. Paley, who, though not a prelate, has been a most influential theologian, confessed *he could not afford to keep a conscience* — the which confession, added to his somewhat jesuitical doctrine of expediency, may tend to show, that the shrewd archdeacon has sometimes argued "according to economy," that is, in a manner adapted, not to truth, but to circumstances. Finally, there now exists a learned bishop, who could publicly declare, that, although he believed in the articles collectively, he did not believe in them separately. Such an assertion should not surprise us, if it is allowable to suppose, that the divines of the present church of England subscribe, with a sigh or a smile, to articles which they can hardly wish to be thought believers in. They make probably some mental reservation—or perhaps do not conceal, that (like Chillingworth) they regard these articles only as peace-ar-

ticles—a comfortable manner of reasoning, which would equally entitle the subscribers to lecture in a Turkish mosque, as in an English steeple-house. And who are our embryo pulpiteers? They are chiefly such younger sons, as are neither possessed of bookish industry and oratory for the bar, nor of physical strength and courage for the army. Such instructors must consider religion only as a trade—and, in the hopes of promotion in the church militant, must be willing to lend a hand toward supporting any profitable system of delusion (18).

If living upon the people, instead of enlightening them, be not the object of the clergy, it certainly is the object of the lawyers. A certain lord chief justice is said to have declaimed, only a few days ago, against the bad effects of education.

Among the more independent part of our laity, there have always existed persons, who, like Sir William Temple, think that religion is only good for the mob. Indeed, our English aristocrats, especially those of the last and the present generation, are notoriously hypocritical in both religion and politics. They assist at public prayers, only, as they say, to set a good example to their servants. Even a long residence abroad, which ought to enlarge the mind, serves only to render some persons yet greater favourers of hypocrisy. I have heard of a gentleman, who admires the maxim of deceiving the people, because he found that the Hindoos might be forced to speak the truth, by swearing them upon consecrated rice.

If the doctrine of deceitfulness is almost universally maintained by the aristocracy of the British Isles (which have long been the most religious part of Europe), it is no wonder if the aristocrats of foreign climes are equally barefaced, in desiring freedom for themselves and slavery for the producers of their wealth.

The use of certain dogmata in stultifying the people, was never more strikingly exemplified, than in the famous catechism promulgated, only a few years ago, by Austriaco-Italian despotism.

Italy has long been famous for pious frauds—but it has occasionally produced detecters of these frauds. Pomponatius maintained, that the dogma of a future life and of the soul's immortality was invented by politicians. Machiavelli said, that miracles were invented by princes for the benefit of their subjects, and that the prince ought to be the first of deceivers in observing religious ceremonies (19).

In more northern countries, the grammarian Antonius Schorus (20) was banished from Heidelberg, because, in his Latin comedy, "Eusebia," he wished to prove that religion was despised by the great people, and was respected only by the vulgar. We read also of the unfortunate law-student J. G. Ram, who, before voluntarily quitting the woes of this life, wrote a species of testament, in which he says: "Religion pertains to the vulgar, invented, forsooth, to deceive men, and the better to rule them. That those things which are commonly delivered concerning religion, may be taught by priests, reason, as it is said, demands."

Before concluding the historical part of this subject, let me add what some of the modern French literati (whose influence has been so powerful over the whole of Europe) have said, or written, concerning the grand question of deceiving the vulgar.

Buffon is reported to have said, that he considered religion to be necessary for the people—and that, for this reason, he used the word "creator" instead of "nature," and thereby also avoided giving offence to the Sorbonne.

Voltaire, the greatest theist of modern times, says:

"Consult Zoroaster, and Minos, and Solon,
And the martyr Socrates, and the great
Cicero:
They have all adored a master, a judge, a
father.
This sublime system is necessary to man.
It is the sacred tie of society,
The first foundation of sacred equity,
The bridle of the wicked, the hope of the
just.
If the heavens, deprived of their august
impress,
Could ever cease to manifest him—
If god did not exist we must invent him."

Moreover, Voltaire, in his "Traité sur la Tolerance," printed in 1763, has devoted a chapter to this very subject: "If it is useful to keep the people in superstition"—in the beginning of which chapter he says: "Such is the feebleness of human nature, and such its perversity, that it is better, without doubt, for it to be subjugated by all the superstitions possible, provided they are not murderous, than to live without religion. Man has always had need of a rein." Methinks, if Voltaire had always written thus, the priests would have canonised him.

The author of the Essai sur les Préjugés is decidedly opposed to the doctrine of deceit—but he acknowledges "Policy thinks itself obliged to deceive the people, to retain them in their sad prejudices, to annihilate in all hearts the desire of instruction and the love of truth....The chiefs of the people are obstinate in thinking ignorance and brutality useful."

Linguet, an anti-philosophical publicist, says that religion is a sublime invention.

Lemaire, the editor of the "Contagion Sacrée," says: "the people must have a religion."

La Place (the greatest mathematician that ever existed) was of opinion that atheism is adapted only for the *savans* (21).

I have now brought forward quite a sufficiency of instances to prove the universal prevalence of the doctrine of deceit. But the universality of a doctrine is no proof of its truth—otherwise we might believe in witchcraft, ghosts, &c. Let us rather argumentatively inquire, whether deceiving the vulgar is really a good policy.

Now the term *vulgar*, in the phrase before us, evidently means *the ignorant*—and all ignorance is comparative, and is, moreover, of infinitely diversified species. But let it be granted, that *the ignorant* are, in this country, *such persons as cannot read or write.* These persons are of two sorts, 1st, those who have not yet been taught, viz. children—and 2nd, those who probably never will be taught, viz. old, uneducated people. It is impossible to reason with either of these two classes of persons, as with those who have profited by the recorded wisdom of past ages, and still less as with those, who have attained that grand object of a refined education—the power of judging in the abstract.

It is then evident, that "the vulgar," as above defined, are beings of inferior rationality. But, because they are inferior beings, they are not, I think, to be therefore habitually deceived.

For, how many instances could be produced of persons who have seemed to consider themselves privileged to deceive the vulgar, and who have ultimately had good reason to repent of their deceitfulness. I do not allude to any silly youth, who, when playing the ghost, may have been very properly run through the body by another youth, who would not be frightened. But I allude to those hoary-headed, systematical, and licensed hypocrites, who, after long encouraging an error, have at last fallen victims, either to the same, or to a cognate or similar error. The most learned Egyptian might perhaps have been torn to pieces by the mob, if he had, though unwillingly, destroyed a cat. The brahmin of highest caste may, I have heard, sink, at once, into a pariah, if forced to eat beef. The most faithful believer in the divine mission of Mohammed, would perhaps be impaled, if he openly derided the horse El-Borak and the bridge El-Seirat. Even under more regular governments, one of our most orthodoxly intolerant high-churchmen might find himself inconveniently situated, if, when abroad, he refused to take off his hat to a popish procession. Again, in part of this our blessed country, the strictest believer in our old thirty-nine articles might, I am told be prevented from gaining his livelihood in the church, if he refused to sign the eighty new articles of one of our present bishops.

In short, in a barbarous country it is almost impossible to be secure against the savageness of superstition—and, in a demi-civilised country, like our own and the greater part of Europe, faith (unless perhaps such as the vicar of Bray's) does not always produce security or comfort. Cranmer, a founder of our half-reformed christianity, burnt heretics during Edward the Sixth's reign, and was himself burnt as a heretic during the reign of Edward's successor (22). On the other hand, those four dominicans were similarly burnt alive, who wished to keep up a long-established doctrine of christianity, even by imposing upon, and frequently endeavouring to poison, one of their own brethren.

Superstition therefore (the grand effect of the doctrine of deceit) is often of no avail, and is sometimes of great detriment, even to the deceivers.

And to the deceived themselves, it is far more frequently destructive. For instances of *physical* destruction, read of the crusades and of the St. Barthélemi. For instances of *moral* destruction, behold one quarter, probably, of the inhabitants of madhouses.

It may indeed be objected, that some persons are enamoured of their error, and that we have no right to deprive them of it. Thus Gibbon says: "The practice of superstition is so congenial with the multitude, that, if they are forcibly awakened, they still regret the loss of their pleasing vision." Ælianus mentions a certain Thrasyllus, who rejoiced at seeing any vessels enter the Piræus, believing them to be his own—and Horatius speaks of a man (by some called Lycas) who, in an empty theatre, imagined that he heard admirable tragedies. Now these examples would form a good argument, if superstition were only a private and solitary vice. Lycas was a good neighbour and an agreeable host, as the poet tells us—therefore his peculiar fancy about the theatre might have been left to him, as affecting no one except himself. But it is otherwise with superstition. Firm believers must have often thought it an act of charity, rather to broil an incredulous neighbour for half an hour in this world, than to let him broil for ever in the next. It is evident, therefore, that, for every individual of common sense to attack damnatory doctrines and the other dogmata of licensed deceivers, is but a rightly-understood system of self-defence.

As to attempting to cure a people's vicious education by impostures, this is only perpetuating an evil, and perhaps giving it a yet worse direction. Mohammed may have cured the Arabs of idolatry—but he inspired them with a spirit of proselytism, which spread ruin over half the world—and, by giving them a written code of faith, he bound down their intellects for ever.

Deceit can only be justifiable for a very short time, and towards an infuriated mob. When the vulgar are once in a state of tranquillity, they will more safely be kept quiet by the staff of a police-officer than by the crozier of a bishop. Forcible restraint is the only argument fit to be used with beings who were never endued with instinct, and who have left uncultivated, or have abandoned, their reason. A desperately-ignorant and actively-vicious man ought to be treated as a tiger—for, in depriving a furious animal of the means of doing injury, it signifies little whether he walk upon two legs or upon four. Hence, if any one were entrusted with the government of the Neapolitan lazzaroni, or of some hot-headed, wild, half-naked, Irishmen, or any other set of human beings, whom superstition and bad government has deprived of reason, he would be fully justified in *forcibly* preventing them from annoying their neighbours.

But *force* ceases to be justifiable, after sufficient time has been allowed for usefully educating those who are now infants. The grown-up generation may be despaired of. Human beings have hitherto been, for the most part, mere masses of variously compounded folly and villany. But let us not despair of the future generations. The descendant of the most ignorant bigot, or of the most cruel despot, is, physically speaking, almost, if not entirely, as capable of receiving useful knowledge as the child of the most profound philosopher.

The vulgar should therefore, be *educated*, *not deceived*—and the selfish, or short-sighted, rulers, who give themselves no pains to improve the intellects of the rising generation, ought to be condemned to banishment and contempt—the punishments best inflicted upon tyrants.

END OF THE TEXT.

NOTES.

(1) Clemens Alex. blames the pagans for rejecting Moses, while they believe in Minos, Lycurgus, and Zaleucus.

(2) Moses is scandalously compared to Numa, in the famous "Moisade," written by J. B. Rousseau, or perhaps by Lourdet. The poem is inserted in note 4 of Duvernet's "Life of Voltaire."

(3) Plato introduces Socrates as condemning a great many poetical fictions concerning the gods — but as considering that rulers might lie for the benefit of the state.

(4) Cudworth argues at great length, that the notion of a deity was not invented by legislators. He relies especially upon the argument of (the sceptic) Sextus, that then it is not explained whence the legislators themselves derived this notion. But Sextus seems not to speak of the deity (a philosophical abstraction) but of the gods (the sprites or demons of the vulgar). If, therefore, "fear first made gods in the world," some legislators may possibly have availed themselves of the ignorance of the superstitious, so as to methodize and concatenate political religions. Cudworth's Annotator grants part of this argument. He also (very safely) allows, that Mohamet and Oliver Cromwell made a tool of religion.

(5) An interlocutor in Plutarch's "It is not good to live according to the system of Epicurus," argues that superstition is of use to keep the wicked from crime. But afterwards he acknowledges, that most persons regard the infernal punishments as mere nurses' stories—and that those who do fear them, secure themselves by religious ceremonies and purifications.

(6) By a sort of poetical justice, the writings of Numa, when found about four (or nearly five) hundred years after his death, were burnt by order of the senate—the prætor Petilius having declared: "That he did not think it pious or just to make them public."

(7) And let me here observe, that Zoroaster (if he ever existed), and, many centuries afterwards, Manes (of whose existence I have some doubts), are said (like Pythagoras) to have concealed themselves in caverns, where they prepared their sacred books. Another Persian legislator, Mazdek, who was also put to death (about A. D. 535), pretended to converse with a pyræum.

(8) In his second letter to the Thessalonians, Paul was perhaps thinking of the complaint of Jeremiah: "O lord, thou hast deceived me, and I was deceived," and of Yêhouh's denunciation of the idolatrous prophets, in Ezekiel: "I, the lord, have deceived that prophet." Deceitful miracles are mentioned in the apocalypse of John. Indeed, in the primitive times of christianity, little attention was paid to miracles (see Gibbon), as all parties claimed an almost equal power of working them. Lactantius prefers prophecy to miracles. St. Peter had said: "we have a more sure word of prophecy." Tertullianus shows, that miracles are, in themselves, no argument. Referring to Matth. he says: "Declaring that they would show great miracles, he showed faith in miracles to be rash, as even most easy amongst false Christs." Locke has adopted Spinoza's definition of a miracle. In our own times, a reverend orator, on being asked what he understood by the word miracle, answered "Mirum, a wonder, miraculum, a little wonder"—to which his

antagonist replied, that a derivation was not a definition. But surely a derivation indicates the primary meaning of a word.

(9) I regret the use of so strong a word, but I follow the orthodox translation. If the words κρινω, διαθηκη, λογος, (as also perhaps εκκλησια, πνευμα, αγγελος, αιον, δαιμονιον, πρεσβυτερος, επισκοπος) are occasionally ill translated, let the king and the king's bishops look to it. It is their affair, not mine. My orthodoxy is not stopped by trifles.

(10) The christians and pagans mutually accused one another of credulity, as is shown at great length by Kortholt, in his Paganus Obtrectator.

(11) Origen quotes the same saying from some one. These christians seem to follow Plato, who, in his Timæus, considers it difficult and dangerous to explain to the multitude the father of all things. Moreover, in his second epistle to Dionysius, Plato says: "I must speak to you enigmatically [concerning god], so that, if any thing happens to those tablets, he that reads them may not understand"—a passage which Clemens compares to those of St. Paul.

(12) This saying reminds me of that of Dionysius Alexandrinus: "I do not reject what I have not observed; but admire it the more, because I have not seen it."

(13) This language seems liberal for a christian saint. But one is less astonished at finding similar common sense among the worshippers of Jupiter. Thus, Polybius considered all miracles as fables, invented to preserve in the vulgar a due sense of respect for the deity. Even Xenophon, though much addicted to superstition, says of certain prodigies, that they were considered to have been forged and contrived by the magistrates. Well therefore was it said by Epicharmus, that "to be vigilant, and to be hard of faith, are the sinews of wisdom." Marcus Antoninus congratulates himself that he had learnt "To disbelieve what is said by wonder-workers and jugglers, concerning incantations, and the sending-back demons and the such like."

(14) I know not why we anti-papists thrust upon all the world the *sacred books* of our holy and mysterious religion. Semler would tell us that these books were really kept *sacred* in the early ages.

(15) But probably the gnostics were fully as deceitful. Dr. Mosheim says: "The most celebrated and learned christians, from the age of Origen, whom I consider as the principle teacher of this doctrine, appear to me to have been infected [with deceit], until the priscillianists, in the fifth century, carried this doctrine a great deal too far, and many of the orthodox were not afraid to imitate them. It was then that all lies were condemned and rejected by St. Augustinus, whose doctrine was afterwards preferred, by many teachers, to the platonicians' liberty of lying." Among modern heretics, the anabaptists have had their clancularii, "Who said it was necessary to speak in public like common people, on matters of religion, and to say only in secret what they thought."

(16) But Montesquieu says of their rivals at Byzantium: "When I think of the profound ignorance in which the Greek clergy plunged the laity, I cannot prevent myself from comparing them to those Scythians of whom Herodotus speaks, who deprived their slaves of their eyes, that nothing might prevent their churning."

(17) Many discussions were excited among our clergy by the introduction of printing into England. For, although it was Thomas Bourchier, Archbishop of Canterbury, who had been principally instrumental to the introduction of that art (which, moreover, was first practised in Westminster Abbey, under the patronage of Thomas Milling, Bishop of Hereford), yet, at that period, a certain Bishop of London said, in an assembly of his episcopal brethren: "If we do not succeed in destroying this dangerous invention, it will destroy us." This was, I suppose, when Caxton's first book was published here, in 1474. Gilbert, Kemp, and Hill, were Bishops of London about that time. I know not which of them made this most lamentably true prognostic.

(18) Dr. Isaac Vossius, when asked what had become of a certain man of letters, answered bluntly: "He has turned country parson, and is deceiving the vulgar."

(19) It is remarked, that, according to Plato and Xenophon, governers should be permitted to lie for the public good—and that, according to Valerius Maximus, certain things, to be well received by the public, must be introduced by fraud.

(20) A Dutch protestant who died at Lausanne, in 1552.

(21) Yet, if I recollect right, La Place says, that the great use of astronomy is its incompatibility with superstition. The great Lalande said: "I am more proud of my progress in atheism, than of what I may have learnt in astronomy"—and again: "At nineteen I thought the heavens proved god; now I see in them nothing but matter and motion." Yet even Lalande thought that atheism was "Beyond the vulgar, to whom it would be neither agreeable nor useful."

(22) Leibnitz, who wrote against all sorts of anti-Lutheran heresies, would once have been thrown into the sea by some popish sailors, if he had not pretended to be a catholi

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NATURAL THEOLOGY EXPOSED.

THE ARGUMENTS OF PALEY, BROUGHAM, AND THE BRIDGEWATER TREATISES ON THIS SUBJECT EXAMINED.

BY GEORGE ENSOR.

WRITERS on theology are almost infinite, and they began with the dawn of letters. Poets, philosophers, and orators have contributed their various powers to the discussion. Orpheus led the way among those inspired by the muses—and amidst Grecian sages, Aristotle, in his metaphysics, noticed the subject, and divided it into the natural and civil—the latter he esteemed fabulous, *and intended to deceive*. Cicero wrote an entire treatise concerning the nature of the gods. The schoolmen of course composed folio volumes on the same subject, each longer than the novels of Scuderi—this was the age of interminable debates on vermiculate questions, of suppositions without facts, and arguments without a trace of reasoning. In after times, Leibnitz wrote on metaphysical theology, and many Germans before and after have discussed the same topic, mistaking an abuse of language for new and improved views on that question. We have had in England, also, a large contribution in the same class, physico-theology, astro-theology, &c., and, lastly, Lord Brougham (a man unequalled for the diversity of his knowledge, his power and facility in writing and speaking, and, perhaps, still more distinguished for his unwearied zeal in advancing education in all departments of knowledge), has added to the increasing host a Discourse on Natural Theology. He states that his objects in this treatise are, "To explain the nature of the evidence upon which natural theology rests, and to show that it is a science, the truths of which are discovered by induction, like the truths of natural or moral philosophy." The subject is therefore necessarily relieved from the limits of faith or of belief, as contradistinguished from reason, and of course detached from all peculiarities connected with particular religions. To admit faith in this discussion, would evidently be to mistake the object and the means of debate, and offend against Bacon's repeated warning, "to give faith nothing that is not faith's." I may add, that as the subject is not properly religious, but philosophical, it should not excite any very angry passions among sectarians or religionists. Yet still I more than fear that some, from weakness, or ignorance, or hypocrisy, will be offended if Lord Brougham's and his predecessors' views be controverted, their facts tested, and their logic arraigned. For it is not uncommon with parties to confound the manner of treating a topic with the matter itself—hence the subject being approved by them, the defence for it receives a kind reception, and, even when most faulty, it is approached with reserve, if not with respect—while the contravening critic is denounced as unadvised, hostile, if not insidious, criminal, or prompting, as they suggest, under the veil of romantic truth, the reader to listen to ruinous conclusions. Yet it is certain that philosophy should be discussed philosophically, and that truth never can be injured by truth, though it is frequently tainted and paralysed by falsehood and hypocrisy.

Lord Brougham says it was intended that the "Society for the Diffusion of Useful Knowledge should publish an edition of Paley's Essay on Natural Theology, but that the project was abandoned, lest it might introduce a religious controversy among the members of the society." Whether he was in the minority on this occasion does not appear, yet hence the publication of his present essay, and, no doubt, what is unsuited for an aggregate of persons may not be unfitting for an individual. But why Paley's work should be chosen as the text for a society, or by an individual, in the present state of positive knowledge and advanced opinions, has not been explained. Yet such is the fact, and further, this essay is but a preface to an enlarged republication of Paley's Theology by Lord Brougham, with the co-operation of Sir Charles Bell, in which Lord Brougham says they have made considerable progress. We may also go higher, and ask whence the necessity at all of the discussion? Is theology attacked? Is the deity denied? Long since Bacon said, "In this part of natural theology, we find rather an excess than a defect." Yet since he wrote, a thousand volumes on this topic, in all its bearings, have been composed—and even while Lord Brougham was writing, singly and in partnership, a bequest of £8000 enlisted as many authors as thousands in the legacy, who have pressed all subjects in aid of the same purpose, from "the human hand" to "the function of digestion." Yet Lord Brougham, whatever he may hereafter effect, has published no novelty in respect to natural theology. The beginning, midst, and end of all his

arguments rest on final causes—a process of reasoning which was repudiated by the great apostle of modern philosophy. The fact is notorious. Lord Brougham remarks, rather reprovingly, that *Lord Bacon has not indulged in any speculation akin to natural theology*, and that in his Sylva Sylvarum, "he has not made any allusion to final causes." He further says, "There is hardly any writer upon moral or natural science, in whose works fewer references can be found to the power or wisdom of a superintending providence." Lord Brougham is anxious, however, to weaken this discredit to his argument, and to infer that if Lord Bacon was not a friend, he at worst was but a questionable opponent to the philosophical application of final causes, and he industriously collects some casualties of expression, which he urges as a qualified approbation of them. Well—as Homer nodded, according to Horace, why might not Bacon *nictitate?* And there is another nodding, when a philosophical writer vails to established error—as the learned jesuits, who, when they published Newton's Philosophy, prefaced the work by condemning its contents, for the orthodox reason that the pontificate had decreed that the earth did not move. I do not say that Bacon admitted, with a saving faith, a final cause to conciliate the protestant pontiffs, great and small—but as an example of his very few seeming backslidings in many disquisitions, I subjoin the following: "These final causes, however, are not false or unworthy of inquiry in metaphysics, but their excursion into the limits of *physical causes*, hath made a great devastation in that province—otherwise, when contained within their own bounds, they are not repugnant to physical causes—for the cause that the hairs of the eyelids are to preserve the sight is no way contradictory to this, that pilosity is incident to the orifices of moisture, and so of the rest. These two kinds of causes agreeing excellently together, the one expressing the intention, the other the consequence only." So much saith Bacon for final causes—and if this be an authority, let their professed advocates proclaim their ally. But there are various pilosities (hairiness) on the human body—what are their final causes? Could they be brought within the same scheme of reference, even if man's body was studded with eyes like Argus? And how are these pilosities treated by mankind? Long hair and short hair, in my experience, have had their turn—in an age preceding, wigs were honoured—and even at this day the bench and bar are wigged, in respect to conservative precedents, common to a period of by-gone gentility—and learned serjeants have their wigs tonsured (clipped), a device lay and clerical, and in sheer opposition to the Chinese in office, who nourish a central tuft. Then the beard—what would the Jews, who were ordered not to mar the corners of their beards, or the Turks be, without beards sweeping their bosoms? In this christians also concurred, for Dudley North observes, that at Archangel, "the men count it a sin to have either long hair or a short beard." In other countries this is reversed—in England, who has not heard of love-locks denounced episcopally, and in Ireland, of the glibbes made penal by the law of Henry the eighth? The ancient Britons were content with moustaches, like the more terrible military man—while the modern fashionables nourish an undergrowth about the nether joles which involves the face, as the acanthus is said to have changed a block of stone into a Corinthian capital. Then, whole nations consider hair a beastly excrescence, to be rubbed off as it appears, and eradicated at once and for ever.

Final causes cannot be brought within the pale of Bacon's philosophy, nor can they even enjoy a toleration, though Lord Brougham is anxious to qualify his mighty predecessor's peremptory rejection of them. Bacon, if his own actual discoveries were limited, revealed the earthly and heavenly ways of discovery—his views were simple, his purpose universal. He declared for facts deduced from exact observation, and he taught, according to the homely phrase of his scholar Locke, to "stop when you are at the end of your tether"—he did not transgress the limits he prescribed to others. Yet no one, from his fancy and imagination, and the untutored era in which he flourished, was more likely to luxuriate, not occasionally, but to run riot in language and speculation, for, with overpowering genius, he cropped the flowers of all literature, and made the arts and sciences the zodiac of his intellectual course. However so qualified and adorned, he was a rigid dialectician—he would not depose philosophy nor enshrine it with conceit, though thus he was sure of winning the low popularity which follows the glorification of final causes. On the contrary, he compared them, with peculiar felicity, to a virgin dedicated to god, and sterile in her generation, an expression which might of itself be conclusive of Bacon's judgment on the point. But similar remarks more than once occur in the Novum Organum. He says: "But the impotence of the mind proves more pernicious in the discovery of causes: for although the highest universal in nature ought to be positive things, because they are found and cannot be made, yet the understanding, not knowing how to stop, is still desirous of higher satisfaction, and endeavouring to stretch further light upon *final causes*, which are plainly of the nature of man rather than of the nature of the

universe." And does not Lord Brougham exemplify this observation in his own mode of accounting for final causes? thus, "Had I to accomplish this purpose, I should have used some such means; or had I used these means, I should have thought I was accomplishing some such purpose." Mark, again, how this statement of Lord Brougham is anticipated by Bacon in another essay—he says, "Men make themselves, as it were, the mirror and rule of nature. It is incredible what a number of idols have been introduced into philosophy by the reduction of natural operations to a correspondence with human actions—that is, by imagining nature acts as a man does, which is not much better than the heresy of the anthropomorphites, that sprung up in the cells and solitude of ignorant monks." The interpreters of final causes (final causes being (1) a histeron-proteron, second-first, a postliminious, or after-before, preface) are not only presumptuous, but pernicious to the credit of the subject matter—for when they mistake facts they injure their cause by their ignorance, and when their explanations fall short of what they propose to effect, they tempt those disposed to concur, if not inopportunely urged, to stand at bay and deny the conclusions which otherwise they would have freely adopted. The final-cause expositor acts dexterously, and he explains and is approved—but some of his expositions are not swallowed glibly, and, at last, his ingenuity or effrontery failing, he is forced to admit that the question exceeds his capacity, taking discount at the same time for humility, by acknowledging the limited scope of man's mind. The final-cause expositors, and the best of them, frequently offend against all discretion. Dr. Roget, in his Bridgewater Treatise, says, "He had admitted only such facts as afford manifest evidence of design." Yet, in speaking of thorns, prickles, &c. on different plants, he dogmatises that they are intended particularly to prevent them from the molestation of animals, and he instances a nettle. Why should a nettle be so preserved, instead of thousands of other plants? But is the nettle unmolested? No, for he says that fifty different species of insects feed upon it. Verily, we may, with the old Roman, in Shakspere, remark, "We call a nettle but a nettle, and the faults of fools but folly." This is, however, but the beginning and basis of the extravagance, for he subjoins, "The sting of the nettle is of this class, and its structure bears a striking analogy to that of the poisonous fangs of serpents." Why is the rattlesnake—which, by the by, bears to be thawed and frozen alternately, without ceasing to live—protected by so potent a defence—or, rather, why is he armed against all animals that may inadvertently approach his retreat, and thus deserve, in respect to the final causes of his fangs and poison, the title of *crotalus horridus* (the horrid crotalus)?

The arguers and interpreters of final causes are not less at variance with facts than with circumstances. Professor Buckland declares that the stays of the plesiosaurus were intended to protect the frailty of the form of this extinct race, because, without this peculiar investment, it would be destitute of defence—that is, it was made weak by nature to be artificially strengthened by nature. Again, these writers are enraptured with the provident arrangement which enables the gazelle, antelope, deer, &c., by their swiftness and watchfulness, to escape their natural enemies, and then they express equal admiration that these natural enemies have their feet covered with hair to deaden the sound of their approaching feet—and further, that they are particularly formed for surprise by bounding on their prey. Dr. Roget adds, "Lions and tigers, who feed on gazelles and the like, have jaws and teeth formed for mastication and the destruction of life." Thus it is clear, these final causes counteract each other—one set of animals are qualified by nature to eat the other, and these are aided by nature not to be eaten by them, though they supply their means of living. This is the philosophy of final causes, which is to teach us wisdom, not only beyond Bacon's science, but in opposition to his sagacity—and this philosophy is honoured by the Edinburgh Review, No. 121, and which glorifies the final-cause observations in Roget's treatise, proving, says the reviewer, "*the provident arrangement of the creation*," and adding, that "*knowledge is the wing wherewith we fly to heaven*" — aye, *sic itur ad astra*, thus we go to the stars!

The final-causers also say that nature always acts by the simplest means. Why, the *crotalus horridus* just mentioned has two hundred vertebræ—the common earth-worm has more than half that number of holes on its back for vital purposes—Lyonnet counted in one species of caterpillar four thousand muscular bands—and Roget speaks of the eye of the codfish in the following words: "This little spherical body, scarcely larger than a pea, is composed of five millions of fibres, which lock into one another by means of more than sixty-two thousand five hundred millions of teeth." I repeat, I am not so monstrously absurd as to object to nature in the arrangement of the world and of its inhabitants, but I object to the self-sufficiency of the animal man, that atom on the fidgets, assuming that his capacity embraces the principles, progress, and destination of all beings, animate and inanimate. This outdoes Protagoras, who said, "man is the measure of all things." Again, the

descanters on final causes recapitulate the ingenuity and efforts of nature in the production and maintenance of children. Those who press overbearingly these points, challenge persons, otherwise unobservant, to recollect that many children are still-born, and that one-half of those born alive die in the first years of infancy—and they make this remark not to depreciate nature, as their opponents might insinuate, but to check their verbose and tyrannous presumption. It is also stated by them, that nature is most anxious to perpetuate the races of animals, and to extend life over the surface of the globe. Yet, not to speak of lands once populous now deserted, the earth has been repeatedly overwhelmed, millions of beings having been swept about the globe, and sunk and drowned —huddled together, or separated incongruously, in respect to climates, zones, and earth, and ocean—while, long before these elemental excesses, still greater revolutions smote the globe, and worlds of animals have been so entirely extinguished that their existence is only known by their occasionally disinterred fossil remains. To refer to a great name on this subject, Cuvier says, "That the revolutions and changes on the earth's surface have been numerous....that oviparous quadrupeds are more frequent than viviparous quadrupeds; that they are more abundant, larger, and more various in the older layers than at the actual surface of the globe"—and he gives the following summary: "It is certain that we are at present at least in the midst of a fourth succession of terrestrial animals—and that after the age of reptiles, after that of palæotheria, after that of mammoths, mastodonta, and megatheria, the age arrived in which the human species, together with some domestic animals, governs and fertilises the earth peaceably—and it is only in formations subsequent to this period, in alluvial deposits, in turf-bogs, in the recent concretions, that those bones are found in a fossil state, which all belong to animals known and now existing." In whatever way we consider the language and doctrine of these self-instituted interpreters of nature, their arrogance startles us—yet, with all their self-sufficiency and superciliousness, they are often as lost in the fields of speculation as those vulgar Athenians mentioned by Hobhouse, who considered the ancient statues real bodies, but enchanted for a time in their present petrifaction—or, as the Siberians, who believe that the mighty fossil bones found in their country belonged to creatures which still continue to live beneath the earth—or, as the Esquimaux, who on seeing ships, asked Sacheus if they could fly as well as sail, a conjecture not so extraordinary, by the by, as Kepler's, who, in his early speculation, thought that the planets were animals which floated round the sun, with wings. Yet none of these modern Athenians, Siberians, or Esquimaux extended their deductions to final causes.

It is surprising that men do not hesitate to pronounce their opinions on matters so remote from their possible cognisance. Their daily errors in speculation might chasten their arrogance, for nothing is more common in their explanations than to mistake not only the intent but the object, and this not merely in natural things but in artificial objects, and it happens that the meanest appearances are sometimes honoured with the sublimest commentary. Salt relates the following anecdote: "The French represented four flying birds with human heads like cherubs, which they conjectured most happily to be the souls of the blessed after passing through the ordeal judgment; but unfortunately, it happens, on examining these cherubs with a light, they proved to be gazelles' or goats' heads reversed, rather a common representation on the tombs, the horns being mistaken for birds' legs, the ears for their tails, and the neck where it is cut off for the wings," &c. Here is a specimen of the blunders of men respecting things made by human hands. Daily and hourly men mistake the motives and objects of men, their fellows of their own profession—they mistake flagrantly and notoriously their own motives for their own actions, yet they pronounce authoritatively on the cause and purposes of vegetable and animal life, and the causes of all things on the earth and in the heavens—neither, most certainly, made by man, he himself being earth-born and earth-buried. Yet how contrary, doubly so, if possible, is their presumption, even taking Roget as our director—he says: "The more an organ of sense differs in its structure from those which we ourselves possess, the more uncertain must be our knowledge of its functions." This observation regards animals corresponding with us in various ways, and it applies to organs of sense common to us and them. But has the deity, embracing the universe in his mightiness, organs and senses like man's—or have we rationally any grounds for drawing any conclusion respecting the mode of his energy and apprehension? Affirmatively none, though negatively we might perhaps assume that the deity must be very dissimilar from man—yet weak man pronounces on the objects, purposes, and designs of god, as if god and man were homogeneal, and grew up together, and served the same apprenticeship, and were confidential associates in preparing the infinite arrangements in the great laboratory of space—yet to reproduce one of the simplest organic products by an artificial combination of its elements, has baffled all the efforts of modern philosophers. The doctrine of final causes implies transcendental egotism and impertinence. Hence

surely Bacon was justified in referring arguments from such sources to weakness of mind.

I have stated that Lord Brougham's Natural Theology is in some measure a preface to his intended edition of Paley's Natural Theology. The present essay conforms in many respects to Paley's work, even to the commencing illustration of their common argument. Both, in fact, begin with the eye. Paley also, in his preliminary remarks, has a whimsical discussion on what, for want of a title from the ancient dialecticians, may be designated *lost and found*. He says, "Suppose I had found a watch on the ground, and it should be inquired how the watch happened to be in that place." *(Why, O Paley, you would say it was dropped there.)* He then proceeds, supposing he had inspected the watch, "We perceive that its several parts are framed and put together for a purpose, that is, that they are so formed and adjusted as to produce motion, and that motion so regulated as to point out the hour of the day," &c. *(Excellent guess! I, Paley, having the ditto in my fob.)* He then runs over the different parts of the work of the watch, concluding, "The inference, we think, is inevitable, that the watch must have had a maker, that there must have existed, at some time and at some place or other, an artificer or artificers who formed it for the purpose which we find it actually to answer, who comprehended its construction and designed its use." This argument is continued through the first two chapters—it is the basis of the whole volume. Never was any position more gratuitous or sophistical. What sort of person, and in what state of society, to give any colour to the device, is this hypothetical watch-finder? Civilised or otherwise, skilled in mechanism or ignorant of its rudiments? For any purpose of reasoning or illustration he should be considered as having no knowledge of watches. Now, suppose a watch dropped among savages—suppose it going—it is taken up—it might be imagined they would regard it on the ground for some time with surprise, if not with alarm—the hands move, it ticks. Suppose it laid open and inspected—so far from ignorant people believing it was a machine made by their fellow-man, they would probably refer it to supernatural agency, if they speculated on cause and effect, or assume that it was one of an unknown class of living things, propagated by parents, or growing like plants. In the South Sea Islands nails were so considered, and a native sowed the second that he had obtained, expecting it would produce a crop of nails when the yams were ready to be dug. But Paley's watch-finder is not an unenlightened man, but a very peculiar adept—he is skilled in many branches of mechanism. Paley exhibits him impliedly as never having seen a watch, yet knowing all its construction, and that not as an apprentice but as a master artist, for he says that after inspecting it in motion he was satisfied "That if the different parts had been differently shaped from what they are, or placed after any other manner, or in any other order than that in which they are placed, either no motion at all would have been carried on in the machine, or none which would have answered the use that is now served by it." So much for this original watch-finder, at once ignorant and scientific, who at sight concluded that the watch had a maker—that it was made as it ought to be, on a careful examination of all its parts—and that if made otherwise it would not have gone at all, or gone most imperfectly, a presumptuous conclusion, whether made by Paley in his own person or not, and false, for watches may be of very different construction, yet keep time with equal accuracy. Thus Paley imagines a case and assumes facts, to ground dramatically the superstructure of theology on final causes. This extravagance is not a casual error on some extraneous or auxiliary point, but a primitive, inherent, absolute, elaborate absurdity, on which his whole argument begins, proceeds, and concludes. Paley then discusses the formation of the eye or eyes, and some of the lower animals have eight—he says, "There is precisely the same proof that the eye was made for vision, as there is that the telescope was made for assisting it—the fact is, they are both instruments." This argument he discusses in detail. Lord Brougham follows him: "The same induction of facts which leads us to a knowledge of the structure of the eye and its functions on the animal economy, leads us to the knowledge of its adaptation to the properties of light. It is a truth in physics, in the strictest sense of the word, that vision is performed by the eye refracting light and making it converge to a focus upon the retina. Upon the same evidence which all natural science rests, reposes the knowledge that the eye is an optical instrument. This is a truth common to both physics and theology. Before the days of Sir Isaac Newton, men knew that they saw by means of the eye, that the eye was constructed on principles; but the reasons of its peculiar conformation they knew not, because they were ignorant of the different refrangibility of light: when his discoveries taught this truth it was found to have been acted upon, and consequentely known by, the being (2) who created the eye. Still our knowledge was imperfect, and it was reserved to Mr. Dollond, to discover another law of nature—the different dispersive powers of different substances, which enabled him to compound an object-glass that

more effectually corrected the various refrangibility of the rays. It has been observed that this truth must have been known to the maker of the eye, for upon its basis is that instrument far more perfect than the achromatic glass of Dollond," &c. But Lord Brougham does not conclude his argument as Paley, who queried: "It may be asked, why should not the deity have given to the animal the faculty of vision at once? Why this circuitous perception, the ministry of so many means; an element provided for the purpose reflected from opaque substances; refracted through transparent ones?" Which Paley answers: "It is only by the display of contrivance that the existence, the agency, the wisdom of the deity could be testified to his rational creatures. This is the scale by which we ascend to the knowledge of our creator which we possess, so far as it depends upon the phenomena or the works of nature." This appears to me, to use all possible temperance in language, passing strange.

Lord Brougham brings forward the deity, with Newton and Dollond, as opticians of the same school, while Paley affirms that the deity complicated the means of vision, in order, by the display of contrivance, to testify to his rational creatures his own ingenuity and wisdom—that is to say, the eye is an elaborate instrument, not so much for the service of those who see, but as a means, at once mysterious and revealed, to improve their belief in natural theology (3). This is surprising considering who and on what occasion such dogmas are proclaimed. What! to suppose they advance the doctrine of an overruling providence, that they exalt that great cause, universal, immortal, and unchanged, by attributing to him chemical and mechanical speculations in handicraft and technical language! Dugald Stewart said, "When I study the intellectual powers of man in the writings of Hartley, of Preistley, of Darwin, of Tooke, I feel as if I were examining the sorry mechanism that gives motion to a puppet." And if there be any truth in this feeling of Stewart, what must be the sentiments of those who witness authors exhibiting the deity in their pages as a chamber artizan, composing and compounding eyes, &c. for this very puppet? From the eye Paley proceeds to other parts of the body, then to birds. The following exposes the difficulty of procuring examples, though now all natural history is employed as votive offerings for this purpose, to extend the dominion of final causes. Paley says, "In the small order of birds which winter with us, from the snipe downwards, let the external colour of the feathers be what it will, their creator has universally given them a bed of black down next their bodies. Black we know is the warmest colour, and the purpose here is to keep in the heat arising from the heart and the circulation of the blood. It is further likewise remarkable, that this is not found in large birds; for which there is also a reason: small birds are much more exposed to the cold than large ones, forasmuch as they present in proportion to their bulks a much larger surface to the air." If black be the warmest colour, why in Norway, as Mr. Clarke says, do the people prefer white kine for their hardihood? and again, if Paley be orthodox, nature mistakes when some animals, brown in summer, change in hyperborean regions on the approach of winter their dark hair for grey. So much by innuendo on colour and final causes! But why does Paley resort to England as the region where nature especially exhibits her ingenuity, by lining the feathers of small birds with black down? Beckford, in his Excursion in Portugal, mentions a lady birdfancier who decided that England had no native birds, because the country was too cold—and a Jesuit, probably the confessor, who was of the company, confirmed the lady's observation by quoting the indisputable authority of Camoens:

> A Grande Inglaterra, che de neve
> Boreal sempre abunda.

But setting all this aside, as surplusage, why did Paley specify snipes on this occasion? Snipes are not peculiar to England, nor even to Europe—on the contrary, to use the words of the Scotch Encyclopedia, "They are universal birds, in every quarter of the globe and in all climates." After birds, Paley exercises his ingenuity in working out the doctrine of final causes on fishes. One instance deserves a passing remark: "The shell of a lobster's tail, in its articulation and overlappings, represents the jointed part of a coat of mail, or rather, which I believe to be the truth, a coat of mail is in imitation (4) of a lobster's shell." The lobster's tail is a final cause, certainly, but here it is cause upon cause, or, as the lawyers say, cause and cross cause. As Paley drew a final cause from the black inside down of small birds, he draws a final cause from the inside lining of large quadrupeds: "Another perfection of the animal mass is the *package*, I know nothing which is so surprising. Examine the contents of the trunk of any large animal," &c. Paley also professes to explain by final causes famines, blights, &c.—he says, "What we call famines and blights are oftentimes legions of animated beings, claiming their portions in the bounty of nature. What corrupts the produce of the earth to us prepares it for them, and it is by means of their rapid multiplication that they may take possession of their pasture; a slow propagation would not meet the opportunity."

Then Paley is at issue with uncle Toby—that the world is large enough for you and me he denies—and the final cause obtrudes adversely, for Paley holds that man should perish in order that legions of flies and vermin should enjoy the bounty of nature. Paley is often homely, but expressive, in his language, as about the *package* in the trunk, which I have mentioned — he also deals sometimes too fervently in the reality—while in the following illustration there is something of pastoral gallantry, which brings flirtation within the vortex of final causes. He writes: "The glowworm is a female caterpillar, the male of which is a fly, lively, comparatively small, dissimilar to the female in appearance; probably also distinguished from her in habits, pursuits, and manners, as he is unlike in form and external construction. Here then is the adversity of the case. The caterpillar cannot meet her companion in the air, the winged rover disdains the ground. They might therefore never be brought together, did not this radiant torch direct the volatile mate to his sedentary female. In this example we also see the resources of art anticipated. One grand operation of chemistry is the making of phosphorus: and it was thought an ingenious device to make phosphoric matches supply the place of lighted tapers; now this very thing is done in the body of the glowworm." Excellent archdeacon!—so the glowworm is the quasi inventor of this phosphorus, and it originated with the gallantry of life and love and final causes! Lord Brougham, true to his text, does not forget the glowworm, though he does not display it with all the radiance, and, as the poet Thompson would say, the effusive force of his predecessor. He says: "Thus it is pleasing to find that the properties of two curves, so exceedingly unlike as the ellipse and hyperbola closely resemble each other, or that appearances so dissimilar as the motion of the moon and the fall of an apple from the tree, are different forms of the same fact; it affords a pleasure of the same kind to discover that the light of the glowworm and the song of the nightingale are both provisions of nature for the same end, of attracting the animal's mate and continuing its kind." Thus Lord Brougham adds to the glowing lady a companion-piece of the serenading gentleman. On this interesting topic of final causes, in defence of natural theology, might be added, with equal propriety, the courtship, in the owling time of night, of the death-watch. The noise made by the male, the terror of many midnight listeners, is the "Come hither," to his coy sweetheart—and, strange to say, he effects this love-note by knocking his forehead against the timber in the chamber—the bed-post, or window-shutter—hence, of course, the caveat, no faith in appearances, is referable to the unrequited love of the female death-watch. Paley, among his final causes, considers night as kindly provided for the sleep of animals—he says, "The last relation of this kind which I shall mention is that of sleep to night, and it appears to me to be a relation which was expressly intended. Two points are manifested: first, that the animal frame requires sleep; secondly, that night brings with it a silence and a cessation of activity, which allows of sleep being taken without interruption and without loss." *Oh day and night, but this is wondrous strange!* But could not eyes close when disposed to sleep, without the curtain of the night being drawn? Do not many animals, and man among the rest, sleep throughout the day—and do not some awake as the sun declines, and enjoy all their faculties and activity at midnight? To suppose that the fixed sun (5) and the revolving earth regarded sleeping and waking animals, is as probable as that night and day typified the sport of hide and seek among children. After this we need not be surprised that Paley considered astronomy (6) as rather unsuitable to afford proofs in favour of theology.

Paley professes to have felt no difficulty in accounting for all natural incidents by final causes, with the exception of the mammæ of male animals. He says, "I confess myself wholly at a loss to guess at a reason, either final or efficient, for this part of the animal frame, unless there be some foundation for an opinion, of which I draw the hint from a paper of Sir Everard Home, that the mammæ of the fœtus may be fixed before the sex is determined." But why might they not be intended to enable males to suckle the young, in case of necessity, for such has occurred? Humboldt relates, in his American travels, and it is also repeated in a digest of them in the Cabinet Library, that on the death of a mother, the father took the babe to bed, and suckled it, and that the child was reared by this means. Such are the leading points of the lauded and popular treatise of Paley. He explains and specifies the purposes, means, and consummation of the deity's will in all things presented to our senses—he is positive respecting the objects and designs of the great cause, universal and unchanged—yet Paley is not positive respecting circumstances immediately connected with mankind, and he not only hesitates, but professes ignorance of the cause of some of the enjoyments of his fellow-men, and even of the causes of his own repeated pleasures and pursuits. He says, "We can give no account whatever of our pleasure in the simple and original perception; and even when physical sensations are assumed, we can seldom account for them in the secondary and compli-

cated shapes in which they take the name of diversions. I never yet met with a sportsman who could tell me in what the sport consisted; who could resolve it into its principle, and state that principle. I have been a great follower of fishing myself, and in its cheerful solitude have passed some of the happiest hours of a sufficiently happy life; but to this moment I could never trace out the source of the pleasure which it afforded me."

NOTES.

(1) Buffon says, "For these who think to answer by final causes, do not observe that they take the effect for the cause."

(2) It may be thought that Newton countenanced such familiarity of expression, but this is not so. Newton was accused of atheism for a paragraph in his Optics. This probably occasioned the following cautionary quære by Newton in his Optics, and quoted by Lord Brougham: "How came the bodies of animals to be contrived with so much art, and for what end were the several parts? Was the eye contrived without skill in optics, and the ear without knowledge of sound?"

(3) S. Turner improves on this extravagance: "I cannot but believe that one of the great purposes of the deity in creating the insect kingdom was to excite this sentiment (the resurrection) in the human heart, and to raise by it the contemplative mind to look forward to a possible revival from the tomb, as the butterfly from the sepulchral chrysalis."

(4) The following is still more pleasant of the imitative race man. D. Hildredth says the cicadæ or locusts of North America, "Make a great noise and screaming with their air-bladders or bagpipes. These bags are placed under, and rather behind, the wings in the axilla, something in the manner of using the bagpipes with the bags under the arms. I could compare them to nothing else—and, indeed, I suspect the first inventor of the instrument borrowed his ideas from some insect of this kind. They play a variety of notes and sounds, one of which nearly imitates the scream of the tree toad." This I quote from *Brewster's Natural Magic.*

(5) Dr. Gisborne, in his Natural Theology, was chagrined at the liberality of Paley. The Quarterly Review (No. 41, p. 49) reflects properly on Gisborne's allusion to the days of the creation, saying, "He would satisfy himself in dismissing, though with reverential awe, the account, merely in compliance with popular ideas, which represent the sun as a kind of secondary to the earth, and subservient along with the moon, its companion or even equal, to the uses of the globe we inhabit." Let the reviewer not be sure of that—many uphold that the sun and moon move round the earth. There are conservatives in astronomy as in politics. By an advertisement in the London journals, it appears that Mr. Finlayson has published a work, *with plates*, in which he disproves *the false and fabricated solar system of Sir Isaac Newton*, showing that the sun, moon, and stars, move round the earth —and he further proves that the ten tribes are to be restored in 1836. This is the sixth edition of the work in a few years. Newton's Principia did not come to a second ed. till thirty years after the issue of the first. What Euler said of Newton and the English still continues—his discoveries were received by all but his countrymen.

(6) He says that astronomy is not the best medium to prove the agency of an intelligent creator. Aristotle thought otherwise. Cicero quotes the passage in *de Natura Deorum*, from a lost work of Aristotle.

Roget says truly, "Every individual, vegetable and animal, takes its rise from an atom of imperceptible minuteness, and gradually increases in bulk by successive accretions of new matter, derived from foreign sources, and by some refined but unknown processes transmuted into its substance.

To prove a creation many very odd fancies have been propagated, and even by men of the rarest genius, as Leibnitz, who imagined that he saw in the binary arithmetic the image of the creation, which he communicated to the jesuit Grimaldi, president of the tribunal of mathematics in China, in hopes that this emblem of the creation would convert the emperor to christianity, because he was passionately fond of mathematics. Some presume to name the year and day of the creation—the Hindoos assert that the world began on a Sunday at sunrise, and they add that the deluge began on a Friday.

LONDON: HETHERINGTON AND WATSON.—Price ONE PENNY.

THE LIBRARY OF REASON.

THE FALLEN STAR;

OR, THE HISTORY OF A FALSE RELIGION.

BY SIR E. L. BULWER, BART.

And the Stars sat, each on his ruby throne, and watched with sleepless eyes upon the world. It was the night ushering in the new year, a night on which every star receives from the archangel that then visits the universal galaxy, its peculiar charge. The destinies of men and empires are then portioned forth for the coming year, and, unconsciously to ourselves, our fates become minioned to the stars. A hushed and solemn night is that in which the dark gates of time open to receive the ghost of the dead year, and the young and radiant stranger rushes forth from the clouded chasms of eternity. On that night, it is said that there are given to the spirits that we see not, a privilege and a power; the dead are troubled in their forgotten graves, and men feast and laugh, while demon and angel are contending for their doom.

It was night in heaven; all was unutterably silent, the music of the spheres had paused, and not a sound came from the angels of the stars; and they who sat upon those shining thrones were three thousand and ten, each resembling each. Eternal youth clothed their radiant limbs with celestial beauty, and on their faces was written the dread of calm, that fearful stillness which feels not, sympathises not with the dooms over which it broods. War, tempest, pestilence, the rise of empires, and their fall, they ordain, they compass, unexultant and uncompassionate. The fell and thrilling crimes that stalk abroad when the world sleeps—the parricide with his stealthy step, and horrent brow, and lifted knife; the unwifed mother that glides out and looks behind, and behind, and shudders, and casts her babe upon the river, and hears the wail, and pities not—the splash, and does not tremble! These the starred kings behold—to these they lead the unconscious step; but the guilt blanches not their lustre, neither doth remorse wither their unwrinkled youth. Each star wore a kingly diadem; round the loins of each was a graven belt, graven with many and mighty signs; and the foot of each was on a burning ball, and the right arm drooped over the knee as they bent down from their thrones; they moved not a limb or feature, save the finger of the right hand, which ever and anon moved slowly pointing, and regulated the fates of men, as the hand of the dial speaks the career of time.

One only of the three thousand and ten wore not the same aspect as his crowned brethren; a star, smaller than the rest, and less luminous; the countenance of this star was not impressed with the awful calmness of the others; but there were sullenness and discontent upon his mighty brow.

And this star said to himself—"Behold. I am created less glorious than my fellows, and the archangel apportions not to me the same lordly destinies. Not for me are the dooms of kings and bards, the rulers of empires, or, yet nobler, the swayers and harmonists of souls. Sluggish are the spirits and base the lot of the men I am ordained to lead through a dull life to a fameless grave. And wherefore?—is it mine own fault, or is it the fault which is not mine, that I was woven of beams less glorious than my brethren? Lo! when the archangel comes, I will bow not my crowned head to his decrees. I will speak, as the ancestral Lucifer before me: *he* rebelled because of his glory, *I* because of my obscurity; *he* from the ambition of pride, and *I* from its discontent."

And while the star was thus communing with himself, the upward heavens were parted as by a long river of light, and adown that stream swiftly, and without sound, sped the archangel visitor of the stars; his vast limbs floated in the liquid lustre, and his outspread wings, each plume the glory of a sun, bore him noiselessly along; but thick clouds veiled his lustre from the eyes of mortals, and while above all was bathed in the serenity of his splendour, tempest and storm broke below over the children of the earth: "He bowed the heavens and came down, and darkness was under his feet."

And the stillness on the faces of the stars became yet more still, and the awfulness was humbled into awe. Right above their thrones paused the course of the archangel; and his wings stretched from east to west, overshadowing with the shadow of light the immensity of space. Then forth in the shining stillness, rolled the dread music of his voice: and, fulfilling the heraldry of god, to each star he appointed the duty and the charge, and each star bowed his head yet lower as he heard the fiat, while his throne rocked and trembled at the majesty of the word. But at last, when each of the brighter stars had, in succession, received the

mandate, and the viceroyalty over the nations of the earth, the purple and diadems of kings — the archangel addressed the lesser star as he sat apart from his fellows:

"Behold," said the archangel, "the rude tribes of the north, the fishermen of the river that flows beneath, and the hunters of the forests, that darken the mountain-tops with verdure! these be thy charge, and their destinies thy care. Nor deem thou, O Star of the sullen beams, that thy duties are less glorious than the duties of thy brethren; for the peasant is not less to thy master and mine than the monarch; nor doth the doom of empires rest more upon the sovereign than on the herd. The passions and the heart are the dominion of the stars —a mighty realm; nor less mighty beneath the hide that garbs the shepherd, than the jewelled robes of the eastern kings."

Then the star lifted his pale front from his breast, and answered the archangel:

"Lo!" he said, "ages have past, and each year thou hast appointed me to the same ignoble charge. Release me, I pray thee, from the duties that I scorn; or, if thou wilt that the lowlier race of men be my charge, give unto me the charge not of many, but of one, and suffer me to breathe into him the desire that spurns the valleys of life, and ascends its steeps. If the humble are given to me, let there be amongst them one whom I may lead on the mission that shall abase the proud; for, behold, O Appointer of the Stars, as I have sat for uncounted years upon my solitary throne, brooding over the things beneath, my spirit hath gathered wisdom from the changes that shift below. Looking upon the tribes of earth, I have seen how the multitude are swayed, and tracked the steps that lead weakness into power; and fain would I be the ruler of one who, if abased, shall aspire to rule."

As a sudden cloud over the face of noon was the change on the brow of the archangel.

"Proud and melancholy star," said the herald, "thy wish would war with the courses of the invisible destiny, that, throned far above, sways and harmonises all; the source from which the lesser rivers of fate are eternally gushing through the heart of the universe of things. Thinkest thou that thy wisdom, of itself, can lead the peasant to become a king?"

And the crowned star gazed undauntedly on the face of the archangel, and answered,

"Yea!—grant me but one trial!"

Ere the archangel could reply, the farthest centre of the heaven was rent as by a thunderbolt; and the divine herald covered his face with his hands, and a voice low and sweet, and mild with the consciousness of unquestionable power, spoke forth to the repining star:

"The time has arrived when thou mayest have thy wish. Below thee, upon yon solitary plain, sits a mortal, gloomy as thyself, who, born under thy influence, may be moulded to thy will."

The voice ceased, as the voice of a dream. Silence was over the seas of space, and the archangel, once more borne aloft, slowly soared away into the farther heaven, to promulgate the divine bidding to the stars of far-distant worlds. But the soul of the discontented star exulted within itself; and it said, "I will call forth a king from the valley of the herdsmen, that shall trample on the kings subject to my fellows, and render the charge of the contemned star more glorious than the minions of its favoured brethren; thus shall I revenge neglect—thus shall I prove my claim hereafter to the heritage of the great of earth!"

* * * * *

At that time, though the world had rolled on for ages, and the pilgrimage of man had passed through various states of existence, which our dim traditionary knowledge has not preserved, yet the condition of our race in the northern hemisphere was then what *we*, in our imperfect lore, have conceived to be among the earliest.

* * * * *

By a rude and vast pile of stones, the masonry of arts forgotten, a lonely man sat at midnight, gazing upon the heavens: a storm had just passed from the earth—the clouds had rolled away, and the high stars looked down upon the rapid waters of the Rhine; and no sound save the roar of the waves, and the dripping of the rain from the mighty trees, was heard around the ruined pile: the white sheep lay scattered on the plain, and slumber with them. He sat watching over the herd, lest the foes of a neighbouring tribe seized them unawares, and thus he communed with himself: "The king sits upon his throne, and is honoured by a warrior race, and the warrior exults in the trophies he has won; the step of the huntsman is bold upon the mountain-top, and his name is sung at night round the pine-fires, by the lips of the bard; and the bard himself hath honour in the hall. But I, who belong not to the race of kings, and whose limbs can bound not to the rapture of war, nor scale the eyries of the eagle and the haunts of the swift stag; whose hand cannot string the harp, and whose voice is harsh in the song; *I* have neither honour nor command, and men bow not the head as I pass along; yet do I feel within me the consciousness of a great power that should rule my species—not obey. My eye pierces the secret hearts of men — I see their thoughts ere their lips proclaim them; and I scorn, while I see, the weakness and the vices which I never shared—I laugh at the

madness of the warrior—I mock within my soul at the tyranny of kings. Surely there is something in man's nature more fitted to command—more worthy of renown, than the sinews of the arm, or the swiftness of the feet, or the accident of birth!"

As Morven, the son of Osslah, thus mused within himself, still looking at the heavens, the solitary man beheld a star suddenly shooting from its place, and speeding through the silent air, till it as suddenly paused right over the midnight river, and facing the inmate of the pile of stones.

As he gazed upon the star strange thoughts grew slowly over him. He drank, as it were, from its solemn aspect, the spirit of a great design. A dark cloud rapidly passing over the earth, snatched the star from his sight; but left to his awakened mind the thoughts and the dim scheme that had come to him as he gazed.

When the sun arose one of his brethren relieved him of his charge over the herd, and he went away, but not to his father's home. Musingly he plunged into the dark and leafless recesses of the winter forest; and shaped out of his wild thoughts, more palpably and clearly, the outline of his daring hope. While thus absorbed, he heard a great noise in the forest, and, fearful lest the hostile tribe of the Alrich might pierce that way, he ascended one of the loftiest pine-trees, to whose perpetual verdure the winter had not denied the shelter he sought, and, concealed by its branches, he looked anxiously forth in the direction whence the noise had proceeded. And IT came—it came with a tramp and a crash, and a crushing tread upon the crunched boughs and matted leaves that strewed the soil—it came—it came, the monster that the world now holds no more—the mighty mammoth of the North! Slowly it moved in its huge strength along, and its burning eyes glittered through the gloomy shade: its jaws, falling apart, showed the grinders with which it snapped asunder the young oaks of the forest; and the vast tusks, which, curved downward to the midst of its massive limbs, glistened white and ghastly, curdling the blood of one destined hereafter to be the dreadest ruler of the men of that distant age.

The livid eyes of the monster fastened on the form of the herdsman, even amidst the thick darkness of the pine. It paused—it glared upon him—its jaws opened, and a low deep sound, as of gathering thunder, seemed to the son of Osslah as the knell of a dreadful grave. But after glaring on him for some moments, it again, and calmly, pursued its terrible way, crashing the boughs as it marched along, till the last sound of its heavy tread died away upon his ear.

Ere yet, however, Morven summoned the courage to descend the tree, he saw the shining of arms through the bare branches of the wood, and presently a small band of the hostile Alrich came into sight. He was perfectly hidden from them; and, listening as they passed him, he heard one say to another:

"The night covers all things; why attack them by day?"

And he who seemed the chief of the band, answered:

"Right. To-night, when they sleep in their city, we will upon them. Lo! they will be drenched in wine, and fall like sheep into our hands."

"But where, O chief," said a third of the band, "shall our men hide during the day? for there are many hunters among the youth of the Oestrich tribe, and they might see us in the forest unawares, and arm their race against our coming."

"I have prepared for that," answered the chief. "Is not the dark cavern of Oderlin at hand? Will it not shelter us from the eyes of the victims?"

Then the men laughed, and, shouting, they went their way adown the forest.

When they were gone Morven cautiously descended, and, striking into a broad path, hastened to a vale that lay between the forest and the river in which was the city where the chief of his country dwelt. As he passed by the warlike men, giants in that day, who thronged the streets (if streets they might be called), their half garments parting from their huge limbs, the quiver at their backs, and the hunting spears in their hands, they laughed and shouted out, and, pointing to him, cried, "Morven, the woman! Morven, the cripple! what dost thou among men?"

For the son of Osslah was small in stature and of slender strength, and his step had halted from his birth; but he passed through the warriors unheedingly. At the outskirts of the city he came upon a tall pile, in which some old men dwelt by themselves, and counselled the king when times of danger, or when the failure of the season, the famine, or the drought, perplexed the ruler, and clouded the savage fronts of his warrior tribe.

They gave the counsels of experience, and when experience failed, they drew, in their believing ignorance, assurances and omens from the winds of heaven, the changes of the moon, and the flights of the wandering birds. Filled (by the voices of the elements, and the variety of mysteries which ever shift along the face of things, unsolved by the wonder which pauses not, the fear which believes, and that eternal reasoning of all experience, which assigns causes to effect) with the notion of superior powers, they assisted their ignorance by the conjectures

of their superstition. But as yet they knew no craft and practised no *voluntary* delusion; they trembled too much at the mysteries which had created their faith to seek to belie them. They counselled as they believed, and the bold dream had never dared to cross men thus worn and grey with age, of governing their warriors and their kings by the wisdom of deceit.

The son of Osslah entered the vast pile with a fearless step, and approached the place at the upper end of the hall where the old men sat in conclave.

"How, base-born and craven limbed!" cried the eldest, who had been a noted warrior in his day; "darest thou enter unsummoned amidst the secret councils of the wise men? Knowest thou not, scatterling! that the penalty is death?"

"Slay me, if thou wilt," answered Morven, "but hear! As I sat last night in the ruined palace of our ancient kings, tending, as my farther bade me, the sheep that grazed around, lest the fierce tribe of Alrich should descend unseen from the mountains upon the herd, a storm came darkly on; and when the storm had ceased, and I looked above on the sky, I saw a star descend from its height towards me, and a voice from the star said, 'Son of Osslah, leave thy herd and seek the council of the wise men, and say unto them, that they take thee as one of their number, or that sudden will be the destruction of them and theirs.' But I had courage to answer the voice, and I said, 'Mock not the poor son of the herdsman. Behold they will kill me if I utter so rash a word, for I am poor and valueless in the eyes of the tribe of Oestrich, and the great in deeds and the grey of hair alone sit in the council of the wise men.'

"Then the voice said, 'Do my bidding, and I will give thee a token that thou comest from the powers that sway the seasons and sail upon the eagles of the winds. Say unto the wise men that this very night, if they refuse to receive thee of their band, evil shall fall upon them, and the morrow shall dawn in blood.'

"Then the voice ceased, and a cloud passed over the star; and I communed with myself, and came, O dread fathers, mournfully unto you. For I feared that ye would smite me because of my bold tongue, and that ye would sentence me to the death, in that I asked what may scarce be given even to the sons of kings."

Then the grim elders looked one at the other, and marvelled much, nor knew they what answer they should make to the herdsman's son.

At length one of the wise men said, "Surely there must be truth in the son of Osslah, for he would not dare to falsify the great lights of heaven. If he had given unto men the words of the star, verily we might doubt the truth. But who would brave the vengeance of the gods of night?"

Then the elders shook their heads approvingly; but one answered and said—

"Shall we take the herdsman's son as our equal? No!" The name of the man who thus answered was Darvan, and his words were pleasing to the elders.

But Morven spoke out: "Of a truth, O councillors of kings! I look not to be an equal with yourselves. Enough if I tend the gates of your palace, and serve you as the son of Osslah may serve;" and he bowed his head humbly as he spoke.

Then said the chief of the elders, for he was wiser than the others, "But how wilt thou deliver us from the evil that is to come? Doubtless the star has informed thee of the service thou canst render to us if we take thee into our palace, as well as the ill that will fall on us if we refuse."

Morven answered meekly, "Surely, if thou acceptest thy servant, the star will teach him that which may requite thee; but as yet he knows only what he has uttered."

Then the sages bade him withdraw, and they communed with themselves, and they differed much; but though fierce men, and bold at the war-cry of a human foe, they shuddered at the prophecy of a star. So they resolved to take the son of Osslah, and suffer him to keep the gate of the council-hall.

He heard their decree and bowed his head, and went to the gate, and sat down by it in silence.

And the sun went down in the west, and the first stars of the twilight began to glimmer, when Morven started from his seat, and a trembling appeared to seize his limbs. His lips foamed; an agony and a fear possessed him; he writhed as a man whom the spear of a foeman has pierced with a mortal wound, and suddenly fell upon his face on the stony earth.

The elders approached him; wondering, they lifted him up. He slowly recovered as from a swoon; his eyes rolled wildly.

"Heard ye not the voice of the star?" he said.

And the chief of the elders answered, "Nay, we heard no sound."

Then Morven sighed heavily.

"To me only the word was given. Summon instantly, O councillors of the king! summon the armed men, and all the youth of the tribe, and let them take the sword and the spear, and follow thy servant. For lo! the star hath announced to him that the foe shall fall into our hands as the wild beast of the forests."

The son of Osslah spoke with the voice of command, and the elders were amazed. "Why pause ye?" he cried. "Do the gods of the night lie? On my head rest the peril if I deceive ye."

Then the elders communed together; and they went forth and summoned the men of arms, and all the young of the tribe; and each man took the sword and the spear, and Morven also. And the son of Osslah walked first, still looking up at the star; and he motioned them to be silent, and move with a stealthy step.

So they went through the thickest of the forest, till they came to the mouth of a great cave, overgrown with aged and matted trees, and it was called the cave of Oderlin; and he bade the leaders place the armed men on either side the cave, to the right and to the left, among the bushes.

So they watched silently till the night deepened, when they heard a noise in the cave and the sound of feet, and forth came an armed man; and the spear of Morven pierced him, and he fell dead at the mouth of the cave. Another and another, and both fell! Then loud and long was heard the war-cry of Alrich, and forth poured, as a stream over a narrow bed, the river of armed men. And the sons of Oestrich fell upon them, and the foe were sorely perplexed and terrified by the suddenness of the battle and the darkness of the night; and there was a great slaughter.

And when the morning came, the children of Oestrich counted the slain, and found the leader of Alrich and the chief men of the tribe amongst them, and great was the joy thereof. So they went back in triumph to the city, and they carried the brave son of Osslah on their shoulders, and shouted forth, "Glory to the servant of the star."

And Morven dwelt in the council of the wise men.

Now the king of the tribe had one daughter, and she was stately amongst the women of the tribe, and fair to look upon. And Morven gazed upon her with the eyes of love, but he did not dare to speak.

Now the son of Osslah laughed secretly at the foolishness of men; he loved them not, for they had mocked him; he honoured them not, for he had blinded the wisest of their elders. He shunned their feasts and merriment, and lived apart and solitary. The austerity of his life increased the mysterious homage which his commune with the stars had won him, and the boldest of the warriors bowed his head to the favourite of the gods.

One day he was wandering by the side of the river, and he saw a large bird of prey rise from the waters, and give chase to a hawk that had not yet gained the full strength of its wings. From his youth the solitary Morven had loved to watch, in the great forests and by the banks of the mighty stream, the habits of the things which nature has subnitted to man; and looking now on the birds, he said to himself, "Thus is it ever; by cunning or by strength each thing wishes to master its kind." While thus moralising, the larger bird had stricken down the hawk, and it fell terrified and panting at his feet. Morven took the hawk in his hands, and the vulture shrieked above him, wheeling nearer and nearer to its protected prey; but Morven scared away the vulture, and placing the hawk in his bosom he carried it home, and tended it carefully, and fed it from his hand until it had regained its strength; and the hawk knew him, and followed him as a dog. And Morven said, smiling to himself, "Behold, the credulous fools around me put faith in the flight and motion of birds. I will teach this poor hawk to minister to my ends." So he tamed the bird, and tutored it according to its nature; but he concealed it carefully from others, and cherished it in secret.

The king of the country was old and like to die, and the eyes of the tribe were turned to his two sons, nor knew they which was the worthier to reign. And Morven passing through the forest one evening, saw the younger of the two, who was a great hunter, sitting mournfully under an oak, and looking with musing eyes upon the ground.

"Wherefore musest thou, O swift footed Siror?" said the son of Osslah; "and wherefore art thou sad?"

"Thou canst not assist me," answered the prince, sternly; "take thy way"

"Nay," answered Morven, "thou knowest not what thou sayest; am I not the favourite of the stars?"

"Away, I am no greybeard whom the approach of death makes doting: talk not to me of the stars; I know only the things that my eye sees and my ear drinks in."

"Hush," said Morven, solemnly, and covering his face; "hush! lest the heavens avenge thy rashness. But, behold, the stars have given unto me to pierce the secret hearts of others; and I can tell thee the thoughts of thine."

"Speak out, base-born!"

"Thou art the younger of two, and thy name is less known in war than the name of thy brother; yet wouldst thou desire to be set over his head, and to sit on the high seat of thy father?"

The young man turned pale. "Thou hast truth in thy lips," said he, with a faltering voice.

"Not from me, but from the stars, descends the truth."

"Can the stars grant my wish?"

"They can; let us meet to-morrow." Thus saying, Morven passed into the forest.

The next day, at noon, they met again.

"I have consulted the gods of night, and they have given me the power that I prayed for, but on one condition."

"Name it."

"That thou sacrifice thy sister on their altars; thou must build up a heap of stones, and take thy sister into the wood, and lay her on the pile, and plunge thy sword into her heart; so only shalt thou reign."

The prince shuddered, and started to his feet, and shook his spear at the pale front of Morven.

"Tremble," said the son of Osslah, with a loud voice. "Hark to the gods, who threaten thee with death, that thou hast dared to lift thine arm against their servant!"

As he spoke, the thunder rolled above; for one of the frequent storms of the early summer was about to break. The spear dropped from the prince's hand; he sat down and cast his eyes on the ground.

"Wilt thou do the bidding of the stars, and reign?" said Morven.

"I will!" cried Siror, with a desperate voice.

"This evening, then, when the sun sets, thou wilt lead her hither, alone; I may not attend thee. Now, let us pile the stones."

Silently the huntsman bent his vast strength to the fragments of rock that Morven pointed to him, and they built the altar, and went their way.

And beautiful is the dying of the great sun, when the last song of the birds fades into the lap of silence; when the islands of the cloud are bathed in light, and the first star springs up over the grave of day!

"Whither leadest thou my steps, my brother?" said Orna; "and why doth thy lip quiver? and why dost thou turn away thy face?"

"Is not the forest beautiful; does it not tempt us forth, my sister?

"And wherefore are those heaps of stone piled together?"

"Let others answer; *I* piled them not."

"Thou tremblest, brother: we will return."

"Not so; by those stones is a bird that my shaft pierced to-day; a bird of beautiful plumage that I slew for thee."

"We are by the pile: where hast thou laid the bird?"

"Here!" cried Siror; and he seized the maiden in his arms, and, casting her on the rude altar, he drew forth his sword to smite her to the heart.

Right over the stones rose a giant oak, the growth of immemorial ages; and from the oak, or from the heavens, broke forth a loud and solemn voice, "Strike not, son of kings! the stars forbear their own: the maiden thou shalt not slay; yet shalt thou reign over the race of Oestrich; and thou shalt give Orna as a bride to the favourite of the stars. Arise, and go thy way!"

The voice ceased: the terror of Orna had overpowered for a time the springs of life; and Siror bore her home through the wood in his strong arms.

"Alas!" said Morven, when, at the next day, he again met the aspiring prince; "alas! the stars have ordained me a lot which my heart desires not: for I, lonely of life, and crippled of shape, am insensible to the fires of love; and ever, as thou and thy tribe know, I have shunned the eyes of women, for the maidens laughed at my halting step and my sullen features; and so in my youth I learned betimes to banish all thoughts of love. But since they told me (as they declared to *thee*), that only through that marriage, thou, O beloved prince! canst obtain thy father's plumed crown, I yield me to their will."

"But," said the prince, "not until I am king can I give thee my sister in marriage; for thou knowest that my sire would smite me to the dust, if I asked him to give the flower of our race to the son of the herdsman Osslah."

"Thou speakest the words of truth. Go home and fear not: but, when thou art king, the sacrifice must be made, and Orna mine. Alas! how can I dare to lift my eyes to her! But so ordain the dread kings of the night!—who shall gainsay their word?"

"The day that sees me king, sees Orna thine," answered the prince.

Morven walked forth, as was his wont, alone; and he said to himself, "The king is old, yet may he live long between me and mine hope!" and he began to cast in his mind how he might shorten the time. Thus absorbed, he wandered on so unheedingly, that night advanced, and he had lost his path among the thick woods, and knew not how to regain his home; so he lay down quietly beneath a tree, and rested till day dawned; then hunger came upon him, and he searched among the bushes for such simple roots as those with which, for he was ever careless of food, he was used to appease the cravings of nature.

He found, among other more familiar herbs and roots, a red berry of a sweetish taste, which he had never observed before. He ate of it sparingly, and had not proceeded far in the wood before he found his eyes swim, and a deadly sickness come over him. For several hours he lay convulsed on the ground expecting death; but the gaunt spareness of his frame, and his unvarying abstinence, prevailed over the poison, and he recovered slowly, and after great anguish: but he went with feeble steps back to the spot where the berries grew, and, plucking several, hid them in his bosom, and by nightfall regained the city.

The next day he went forth among his father's herds, and seizing a lamb, forced some of the berries into its stomach, and the

lamb, escaping, ran away, and fell down dead. Then Morven took some more of the berries and boiled them down, and mixed the juice with wine, and he gave the wine in secret to one of his father's servants, and the servant died.

Then Morven sought the king, and coming into his presence alone, he said unto him, "How fares my lord?"

The king sat on a couch, made of the skins of wolves, and his eye was glassy and dim; but vast were his aged limbs, and huge was his stature, and he had been taller by a head than the children of men, and none living could bend the bow he had bent in youth. Grey, gaunt, and worn, as some mighty bones that are dug at times from the bosom of the earth—a relic of the strength of old.

And the king said, faintly, and with a ghastly laugh—

"The men of my years fare ill. What avails my strength? Better had I been born a cripple like thee, so should I have had nothing to lament in growing old."

The red flush passed over Morven's brow; but he bent humbly—

"O king, what if I could give thee back thy youth? what if I could restore to thee the vigour which distinguished thee above the sons of men, when the warriors of Alrich fell like grass before thy sword?"

Then the king uplifted his dull eyes, and he said—

"What meanest thou, son of Osslah? Surely I hear much of thy great wisdom, and how thou speakest nightly with the stars. Can the gods of the night give unto thee the secret to make the old young?"

"Tempt them not by doubt," said Morven, reverently. "All things are possible to the rulers of the dark hour; and, lo! the star that loves thy servant spake to him at the dead of night, and said, 'Arise, and go unto the king; and tell him that the stars honour the tribe of Oestrich, and remember how the king bent his bow against the sons of Alrich; wherefore, look thou under the stone that lies to the right of thy dwelling—even beside the pine-tree, and thou shalt see a vessel of clay, and in the vessel thou wilt find a sweet liquid, that shall make the king thy master forget his age for ever.' Therefore, my lord, when the morning rose I went forth, and looked under the stone, and behold the vessel of clay; and I have brought it hither to my lord, the king."

"Quick—slave—quick! that I may drink and regain my youth!"

"Nay, listen, O king! farther said the star to me:

"'It is only at night, when the stars have power, that this their gift will avail; wherefore, the king must wait till the hush of the midnight, when the moon is high, and then may he mingle the liquid with his wine And he must reveal to none that he hath received the gift from the hand of the servant of the stars. For THEY do their work in secret, and when men sleep; therefore they love not the babble of mouths, and he who reveals their benefits shall surely die.'"

"Fear not," said the king, grasping the vessel; "none shall know: and, behold, I will rise on the morrow; and my two sons—wrangling for my crown—verily I shall be younger than they!"

Then the king laughed loud; and he scarcely thanked the servant of the stars, neither did he promise him reward: for the kings in those days had little thought—save for themselves.

And Morven said to him, "Shall I not attend my lord? for without me, perchance, the drug might fail of its effect."

"Ay," said the king, "rest here."

"Nay," replied Morven; "thy servants will marvel and talk much, if they see the son of Osslah sojourning in thy palace. So would the displeasure of the gods of night perchance be incurred. Suffer that the lesser door of the palace be unbarred, so that at the night hour, when the moon is midway in the heavens, I may steal unseen into thy chamber, and mix the liquid with thy wine."

"So be it," said the king. "Thou art wise, though thy limbs are crooked and curt; and the stars might have chosen a taller man." Then the king laughed again; and Morven laughed too, but there was danger in the mirth of the son of Osslah.

The night had begun to wane, and the inhabitants of Oestrich were buried in deep sleep, when, hark! a sharp voice was heard crying out in the streets, "Woe, woe! Awake, ye sons of Oestrich—woe!" Then forth, wild—haggard—alarmed—spear in hand, rushed the giant sons of the rugged tribe, and they saw a man on a height in the middle of the city, shrieking, "Woe!" and it was Morven, the son of Osslah! And he said unto them, as they gathered round him, "Men and warriors, tremble as ye hear. The star of the west hath spoken to me, and thus said the star: 'Evil shall fall upon the kingly house of Oestrich—yea, ere the morning dawn; wherefore, go thou mourning into the streets, and wake the inhabitants to woe!' So I rose and did the bidding of the star." And while Morven was yet speaking, a servant of the king's house ran up to the crowd, crying loudly—"The king is dead!" So they went into the palace and found the king stark upon his couch, and his huge limbs all cramped and crippled by the pangs of death, and his hands clenched as if in menace of a foe—the foe of all living flesh! Then fear came on the gazers, and they looked on Morven with a deeper awe than the boldest warrior

would have called forth: and they bore him back to the council-hall of the wise men, wailing and clashing their arms in woe, and shouting, ever and anon, "Honour to Morven the prophet!" And that was the first time the word PROPHET was ever used in those countries.

At noon, on the third day from the king's death, Siror sought Morven, and he said, "Lo, my father is no more, and the people meet this evening at sunset to elect his successor, and the warriors and the young men will surely choose my brother, for he is more known in war. Fail me not, therefore."

"Peace, boy!" said Morven, sternly; "nor dare to question the truth of the gods of night."

For Morven now began to presume on his power among the people, and to speak as rulers speak, even to the sons of kings. And the voice silenced the fiery Siror, nor dared he to reply.

"Behold," said Morven, taking up a chaplet of coloured plumes, "wear this on thy head, and put on a brave face—for the people like a hopeful spirit—and go down with thy brother to the place where the new king is to be chosen, and leave the rest to the stars. But, above all things, forget not that chaplet; it has been blessed by the gods of night."

The prince took the chaplet and returned home.

It was evening, and the warriors and chiefs of the tribe were assembled in the place where the new king was to be elected. And the voices of the many favoured Prince Voltoch, the brother of Siror, for he had slain twelve foemen with his spear; and verily, in those days, that was a great virtue in a king.

Suddenly there was a shout in the streets, and the people cried out, "Way for Morven, the prophet, the prophet!" For the people held the son of Osslah in even greater respect than did the chiefs. Now, since he had become of note, Morven had assumed a majesty of air which the son of the herdsman knew not in his earlier days; and albeit his stature was short, and his limbs halted, yet his countenance was grave and high. He only of the tribe wore a garment that swept the ground, and his head was bare, and his long black hair descended to his girdle, and rarely was change or human passion seen in his calm aspect. He feasted not, nor drank wine, nor was his presence frequent in the streets. He laughed not, neither did he smile, save when alone in the forest—and then he laughed at the follies of his tribe.

So he walked slowly through the crowd, neither turning to the left nor to the right, as the crowd gave way; and he supported his steps with a staff of the knotted pine.

And when he came to the place where the chiefs were met, and the two princes stood in the centre, he bade the people around him proclaim silence; then mounting on a huge fragment of rock, he thus spake to the multitude:

"Princes, warriors, and bards! ye, O council of the wise men! and ye, O hunters of the forests, and snarers of the fishes of the streams! hearken to Morven, the son of Osslah. Ye know that I am lowly of race, and weak of limb; but did I not give into your hands the tribe of Alrich, and did ye not slay them in the dead of night with a great slaughter? Surely, ye must know this of himself did not the herdsman's son; surely he was but the agent of the bright gods that love the children of Oestrich. Three nights since, when slumber was on the earth, was not my voice heard in the streets? Did I not proclaim woe to the kingly house of Oestrich? and verily the dark arm had fallen on the bosom of the mighty, that is no more. Could I have dreamed this thing merely in a dream, or was I not as the voice of the bright gods that watch over the tribes of Oestrich? Wherefore, O men and chiefs! scorn not the son of Osslah, but listen to his words; for are they not the wisdom of the stars? Behold, last night, I sat alone in the valley, and the trees were hushed around and not a breath stirred; and I looked upon the star that counsels the son of Osslah; and I said, 'Dread conqueror of the cloud! thou that bathest thy beauty in the streams and piercest the pine-bows with thy presence; behold thy servant grieved because the mighty one hath passed away, and many foes surround the houses of my brethren; and it is well that they should have a king valiant and prosperous in war, the cherished of the stars. Wherefore, O Star! as thou gavest into our hands the warriors of Alrich, and didst warn us of the fall of the oak of our tribe, wherefore I pray thee give unto the people a token that they may choose that king whom the gods of the night prefer!' Then a low voice, sweeter than the music of the bard, stole along the silence. 'Thy love for thy race is grateful to the stars of night: go then, son of Osslah, and seek the meeting of the chiefs and the people to choose a king, and tell them not to scorn thee because thou art slow to the chase, and little known in war; for the stars give thee wisdom as a recompense for all. Say unto the people that as the wise men of the council shape their lessons by the flight of birds, so by the flight of birds shall a token be given unto them, and they shall choose their kings. For, saith the star of night, the birds are children of the winds, they pass to and fro along the ocean of the air, and visit the clouds that are the warships of the gods.

And their music is but broken melodies which they gleam from the harps above. Are they not the messengers of the storm? Ere the stream chafes against the bank, and the rain descends, know ye not, by the wail of birds and their low circles over the earth, that the tempest is at hand? Wherefore, wisely do ye deem that the children of the air are the fit interpreters between the sons of men and the lords of the world above. Say then to the people and the chiefs, that they shall take, from among the doves that nest in the roof of the palace, a white dove, and they shall let it loose in the air, and verily the gods of the night shall deem the dove as a prayer coming from the people, and they shall send a messenger to grant the prayer and give to the tribes of Oestrich a king worthy of themselves.'

"With that the star spoke no more."

Then the friends of Voltch murmured among themselves, and they said, "Shall this man dictate to us who shall be king?" But the people and the warriors shouted, "Listen to the star; do we not give or deny battle according as the bird flies—shall we not by the same token choose him by whom the battle should be led?" And the thing seemed natural to them, for it was after the custom of the tribe. Then they took one of the doves that built in the roof of the palace, and they brought it to the spot where Morven stood, and he, looking up to the stars and muttering to himself, released the bird.

There was a copse of trees a little distance from the spot, and as the dove ascended, a hawk suddenly rose from the copse and pursued the dove; and the dove was terrified, and soared circling high above the crowd, when, lo, the hawk, poising itself one moment on its wings, swooped with a sudden swoop, and, abandoning its prey, alighted on the plumed head of Siror.

"Behold," cried Morven in a loud voice, "behold your king!"

"Hail, all hail the king!" shouted the people. "All hail the chosen of the stars!"

Then Morven lifted his right hand, and the hawk left the prince, and alighted on Morven's shoulder. "Bird of the gods!" said he, reverently, "hast thou not a secret message for my ear?" Then the hawk put its beak to Morven's ear, and Morven bowed his head submissively; and the hawk rested with Morven from that moment and would not be scared away. And Morven said, "The stars have sent me this bird, that, in the day-time when I see them not, we may never be without a counsellor in distress."

So Siror was made king, and Morven the son of Osslah was constrained by the king's will to take Orna for his wife; and the people and the chiefs honoured Morven the prophet above all the elders of the tribe.

One day Morven said unto himself, musing, "Am I not already equal with the king? nay, is not the king my servant? did I not place him over the heads of his brothers? am I not, therefore, more fit to reign than he is? shall I not push him from his seat? It is a troublesome and stormy office to reign over the wild men of Oestrich, to feast in the crowded hall, and to lead the warriors to the fray. Surely if I feasted not, neither went out to war, they might say, this is no king, but the cripple Morven; and some of the race of Siror might slay me secretly. But can I not be greater far than kings, and continue to choose and govern them, living as now at mine own ease? Verily the stars shall give me a new palace, and many subjects."

Among the wise men was Darvan; and Morven feared him, for his eye often sought the movements of the son of Osslah.

And Morven said, "It were better to TRUST this man than to BLIND, for surely I want a helpmate and a friend." So he said to the wise man as he sat alone watching the setting sun,

"It seemeth to me, O Darvan! that we ought to build a great pile in honour of the stars, and the pile should be more glorious than all the palaces of the chiefs and the palace of the king; for are not the stars our masters? And thou and I should be the chief dwellers in this new palace, and we would serve the gods of night, and fatten their altars with the choicest of the herd, and the freshest of the fruits of the earth."

And Darvan said, "Thou speakest as becomes the servant of the stars. But will the people help to build the pile, for they are a warlike race and they love not toil?"

And Morven answered, "Doubtless the stars will ordain the work to be done. Fear not."

"In truth thou art a wondrous man, thy words ever come to pass," answered Darvan; "and I wish thou wouldest teach me, friend, the language of the stars."

"Assuredly if thou servest me thou shalt know," answered the proud Morven; and Darvan was secretly wroth that the son of the herdsman should command the service of an elder and a chief.

And when Morven returned to his wife he found her weeping much. Now she loved the son of Osslah with an exceeding love, for he was not savage and fierce as the men she had known, and she was proud of his fame among the tribe; and he took her in his arms and kissed her, and asked her why she wept. Then she told him that her

brother the king had visited her and had spoken bitter words of Morven: "He taketh from me the affection of my people," said Siror, and blindeth them with lies. And since he hath made me king, what if he take my kingdom from me? Verily a new tale of the stars might undo the old." And the king had ordered her to keep watch on Morven's secrecy, and to see whether truth was in him when he boasted of his commune with the Powers of Night.

But Orna loved Morven better than Siror, therefore she told her husband all.

And Morven resented the king's ingratitude, and was troubled much, for a king is a powerful foe; but he comforted Orna, and bade her dissemble, and complain also of him to her brother, so that he might confide to her unsuspectingly whatsoever he might design against Morven.

There was a cave by Morven's house in which he kept the sacred hawk, and wherein he secretly trained and nurtured other birds against future need, and the door of the cave was always barred. And one day he was thus engaged when he beheld a chink in the wall, that he had never noted before, and the sun came playfully in; and while he looked he perceived the sunbeam was darkened, and presently he saw a human face peering in through the chink. And Morven trembled, for he knew he had been watched. He ran hastily from the cave, but the spy had disappeared among the trees, and Morven went straight to the chamber of Darvan and sat himself down. Darvan did not return home till late, and he started and turned pale when he saw Morven. But Morven greeted him as a brother, and bade him to a feast, which, for the first time, he purposed giving at the full of the moon, in honour of the stars. And going out of Darvan's chamber he returned to his wife, and bade her rend her hair, and go at the dawn of day to the king her brother, and complain bitterly of Morven's treatment, and pluck the black plans from the breast of the king. "For surely," said he, "Darvan hath lied to thy brother, and some evil waits me that I would fain know."

So the next morning Orna sought the king, and she said, "The herdsman's son hath reviled me, and spoken harsh words to me; shall I not be avenged?"

Then the king stamped his feet and shook his mighty sword. "Surely thou shalt be avenged, for I have learned from one of the elders that which convinceth me that the man hath lied to the people, and the base-born shall surely die. Ye, the first time that he goeth alone into the forest my brother and I will fall upon him and smite him to the death." And with this comfort Siror dismissed Orna.

And Orna flung herself at the feet of her husband. "Fly now, O my beloved!—fly into the forests afar from my brethren, or surely the sword of Siror will end thy days."

Then the son of Osslah folded his arms, and seemed buried in black thoughts; nor did he heed the voice of Orna, until again and again she had implored him to fly.

"Fly!" he said at length. "Nay, I was doubting what punishment the stars should pour down upon our foe. Let warriors fly. Morven the prophet conquers by arms mightier than the sword."

Nevertheless Morven was perplexed in his mind, and knew not how to save himself from the vengeance of the king. Now, while he was musing hopelessly, he heard a roar of waters; and behold the river, for it was now the end of autumn, had burst its bounds, and was rushing along the valley to the houses of the city. And now the men of the tribe, and the women, and the children, came running, and with shrieks to Morven's house, crying, "Behold the river has burst upon us!—Save us, O ruler of the stars!"

Then the sudden thought broke upon Morven, and he resolved to risk his fate upon one desperate scheme.

And he came out from the house calm and sad, and he said, "Ye know not what ye ask; I cannot save ye from this peril: ye have brought it on yourselves."

And they cried, "How? O son of Osslah!—we are ignorant of our crime."

And he answered, "Go down to the king's palace and wait before it, and surely I will follow ye, and ye shall learn wherefore ye have incurred this punishment from the gods. Then the crowd rolled murmuring back, as a receding sea; and when it was gone from the place, Morven went alone to the house of Darvan, which was next his own: and Darvan was greatly terrified, for he was of a great age, and had no children, neither friends, and he feared that he could not of himself escape the waters.

Aud Morven said to him, soothingly, "Lo, the people love me, and I will see that thou art saved; for verily thou hast been friendly to me, and done me much service with the king."

And as he thus spake, Morven opened the door of the house and looked forth, and saw that they were quite alone; then he seized the old man by the throat, and ceased not his gripe till he was quite dead. And leaving the body of the elder on the floor, Morven stole from the house and shut the gate. And as he was going to his cave he mused a little while, when, hearing the mighty roar of the waves advancing, and afar off the shrieks of women, he lifted up his head, and said, proudly, "No! in this hour terror

alone shall be my slave; I will use no art save the power of my soul." So, leaning on his pine staff, he strode down to the palace. And it was now evening, and many of the men held torches, that they might see each other's faces in the universal fear. Red flashed the quivering flames on the dark robes and pale front of Morven; and he seemed mightier than the rest, because his face alone was calm amidst the tumult. And louder and hoarser came the roar of the waters; and swift rushed the shades of night over the hastening tide.

And Morven said in a stern voice, "Where is the king; and wherefore is he absent from his people in the hour of dread?" Then the gate of the palace opened; and, behold, Siror was sitting in the hall by the vast pine-fire, and his brother by his side, and his chiefs around him: for they would not deign to come amongst the crowd at the bidding of the herdsman's son.

Then Morven, standing upon a rock above the heads of the people (the same rock whereon he had proclaimed the king), thus spake:—

"Ye desired to know, O sons of Oestrich! wherefore the river hath burst its bounds, and the peril hath come upon you. Learn, then, that the stars resent as the foulest of human crimes an insult to their servants and delegates below. Ye are all aware of the manner of life of Morven, whom ye have surnamed the Prophet! He harms not man or beast; he lives alone; and, far from the wild joys of the warrior tribe, he worships in awe and fear the Powers of Night. So is he able to advise ye of the coming danger—so is he able to save ye from the foe. Thus are your huntsmen swift and your warriors bold; and thus do your cattle bring forth their young, and the earth its fruits. What think ye, and what do ye ask to hear? Listen, men of Oestrich!—they have laid snares for my life; and there are amongst you those who have whetted the sword against the bosom that is only filled with love for you all. Therefore have the stern lords of heaven loosened the chains of the river—therefore doth this evil menace ye. Neither will it pass away until they who dug the pit for the servant of the stars are buried in the same."

Then, by the red torches, the faces of the men looked fierce and threatening; and ten thousand voices shouted forth, "Name them who conspired against thy life, O holy prophet! and surely they shall be torn limb from limb."

And Morven turned aside, and they saw that he wept bitterly; and he said,

"Ye have asked me, and I have answered: but now scarce will ye believe the foe that I have provoked against me; and by the heavens themselves I swear, that if my death would satisfy their fury, nor bring down upon yourselves, and your children's children, the anger of the throned stars, gladly would I give my bosom to the knife. Yes," he cried, lifting up his voice, and pointing his shadowy arm towards the hall where the king sat by the pine-fire—"yes, thou whom by my voice the stars chose above thy brother—yes, Siror, the guilty one! take thy sword, and come hither—strike, if thou hast the heart to strike, the Prophet of the Gods!"

The king started to his feet, and the crowd were hushed in a shuddering silence.

Morven resumed:

"Know then, O men of Oestrich, that Siror, and Voltoch his brother, and Darvan the elder of the wise men, have purposed to slay your prophet, even at such hour as when alone he seeks the shade of the forest to devise new benefits for you. Let the king deny it, if he can!"

Then Voltoch, of the giant limbs, strode forth from the hall, and his spear quivered in his hand.

"Rightly hast thou spoken, base son of my father's herdsman! and for thy sins shalt thou surely die; for thou liest when thou speakest of thy power with the stars, and thou laughest at the folly of them who hear thee: wherefore put him to death."

Then the chiefs in the hall clashed their arms, and rushed forth to slay the son of Osslah.

But he, stretching his unarmed hands on high, exclaimed, "Hear him, O dread ones of the night;"—hark how he blasphemeth."

Then the crowd took up the word, and cried, "He blasphemeth—he blasphemeth against the prophet."

But the king and the chiefs who hated Morven, because of his power with the people, rushed into the crowd; and the crowd were irresolute, nor knew they how to act, for never yet had they rebelled against their chiefs, and they feared alike the prophet and the king.

And Siror cried, "Summon Darvan to us, for he hath watched the steps of Morven, and he shall lift the veil from my people's eyes." Then three of the swift of foot started forth to the house of Darvan.

And Morven cried out with a loud voice, "Hark! thus saith the star who, now riding through yonder cloud, breaks forth upon my eyes—'For the lie that the elder hath uttered against my servant, the curse of the stars shall fall upon him.' Seek, and as ye find him so may ye find ever the foes of Morven and the gods."

A chill and an icy fear fell over the crowd, and even the cheek of Siror grew

pale; and Morven, erect an dark above the waving torches, stood motionless with folded arms. And hark—far and fast came on the war-steads of the wave—the people heard them marching to the land, and tossing their white manes in the roaring wind.

"Lo, as ye listen," said Morven, calmly, "the river sweeps on. Haste, for the gods will have a victim, be it your prophet or your king."

"Slave!" shouted Siror, and his spear left his hand, and far above the heads of the crowd sped hissing beside the dark form of Morven, and rent the trunk of the oak behind. Then the people, wroth at the danger of their beloved seer, uttered a wild yell, and gathered round him with brandished swords, facing their chieftains and their king. But at that instant, ere the war had broken forth among the tribe, the three warriors returned, and they bore Darvan on their shoulders, and laid him at the feet of the king, and they said tremblingly, "Thus found we the elder in the centre of his own hall." And the people saw that Darvan was a corpse, and that the prediction of Morven was thus verified. "So perish the enemies of Morven and the Stars!" cried the son of Osslah. And the people echoed the cry. Then the fury of Siror was at its height, and waving his sword above his head he plunged into the crowd, "Thy blood, base-born or mine."

"So be it!" answered Morven, quailing not. "People, smite the blasphemer. Hark how the river pours down upon your children and your hearths. On, on, or ye perish!

And Siror fell, pierced by five hundred spears.

"Smite! smite!" cried Morven, as the chiefs of the royal house gathered round the king. And the clash of swords, and the gleam of spears, and the cries of the dying, and the yell of the trampling people, mingled with the roar of the elements, and the voices of the rushing wave.

Three hundred of the chiefs perished that night by the swords of their own tribe. And the last cry of the victors was, 'Morven the prophet—MORVEN THE KING!'

And the son of Osslah, seeing the waves now spreading over the valley, led Orna his wife, and the men of Oestrich, their women, and their children, to a high mount, where they waited the dawning sun. But Orna sat apart and wept bitterly, for her brothers were no more, and her race had perished from the earth. And Morven sought to comfort her in vain.

When the morning rose, they saw that the river had overspread the greater part of the city, and now stayed its course among the hollows of the vale. Then Morven said to the people, 'The star-kings are avenged, and their wrath appeased. Tarry only here until the waters have melted into the crevices of the soil.' And on the fourth day they returned to the city, and no man dared to name another, save Morven as the king.

But Morven retired into his cave and mused deeply; and then assembling the people, he gave them new laws; and he made them build a mighty temple in honour of the stars, and made them heap within it all that the tribe held most precious. And he took unto him fifty children from the most famous of the tribe; and he took also ten from among the men who had served him best, and he ordained that they should serve the stars in the great temple: and Morven was their chief. And he put away the crown they pressed upon him, and he chose from among the elders a new king. And he ordained that henceforth the servants only of the stars in the great temple should elect the king and the rulers, and hold council, and proclaim war: but he suffered the king to feast, and to hunt, and to make merry in the banquet-halls. And Morven built altars in the temple, and was the first who, in the North, sacrificed the beast and the bird, and afterwards human flesh, upon the altars. And he drew auguries from the entrails of the victim, and made schools for the science of the prophet; and Morven's piety was the wonder of the tribe, in that he refused to be a king. And Morven the high-priest, was ten thousand times mightier than the king. He taught the people to till the ground, and to sow the herb; and by his wisdom, and the valour that his prophecies instilled into men, he conquered all the neighbouring tribes. And the sons of Oestrich spread themselves over a mighty empire, and with them spread the name and the laws of Morven. And in every province which he conquered, he ordered them to build a temple to the stars.

But a heavy sorrow fell upon the years of Morven. The sister of Siror bowed down her head and survived not long the slaughter of her race. And she left Morven childless. And he mourned bitterly and as one distraught, for her only in the world had his heart the power to love. And he sat down and covered his face, saying:—

"Lo: I have conquered and travailed; and never before in the world did man conquer what I have conquered. Verily the empire of the iron thews and the giant limbs is no more: I have found a new power, that henceforth shall sway the lands;—the empire of a plotting brain and a commanding mind. But, behold, my fate is barren, and I feel already that it will grow neither fruit nor tree as a shelter to

mine old age. Desolate and lonely shall I pass unto my grave. O Orna! my beautiful! my loved! none were like unto thee, and to thy love do I owe my glory and my life. Would for thy sake, O sweet bird! that nestled in the dark cavern of my heart —would for thy sake that thy brethren had been spared, for verily with my life would I have purchased thine. Alas! only when I lost thee did I find that thy love was dearer to me than the fear of others." And Morven mourned night and day, and none might comfort him.

But from that time forth he gave himself solely up to the cares of his calling; and his nature and his affections, and whatever there was left soft in him, grew hard like stone; and he was a man without love, and he forbade love and marriage to the priest.

Now, in his latter years, there arose OTHER prophets; for the world had grown wiser even by Morven's wisdom, and some did say unto themselves, "Behold Morven, the herdman's son is a king of kings: this did the stars for their servant; shall we not also be servants to the star?"

And they wore black garments like Morven, and went about prophesying of what the stars foretold them. And Morven was exceeding wroth; for he, more than other men, knew that the prophets lied; wherefore he went forth against them with the ministers of the temple, and he took them, and burned them by a slow fire: for thus said Morven to the people:—"A true prophet hath honour, but I only am a true prophet;—to all false prophets there shall be surely death."

And the people applauded the piety of the son of Osslah.

And Morven educated the wisest of the children in the mysteries of the temple, so that they grew up to succeed him worthily.

And he died full of years and honour; and they carved his effigy on a mighty stone before the temple, and the effigy endured for a thousand ages, and whoso looked on it trembled; for the face was calm with the calmness of unspeakable awe!

And Morven was the first mortal of the North that made religion the stepping stone to Power. Of a surety Morven was a great man!

It was the last night of the old year, and the stars sat, each upon his ruby throne, and watched with sleepless eyes upon the world. The night was dark and troubled, the dread winds were abroad, and fast and frequent hurried the clouds beneath the the thrones of the kings of night. And ever and anon fiery meteors flashed along the depths of heaven, and were again swallowed up in the graves of darkness. But far below his brethren, and with a lurid haze around his orb, sat the discontented star that had watched over the hunters of the North.

And on the lowest abyss of space there was spread a thick and mighty gloom, from which, as from a caldron, rose collumns of wreathing smoke; and still, when the great winds rested for an instant on their paths, voices of woe and laughter, mingled with shrieks, were heard booming from the abyss to the upper air.

And now, in the middest night, a vast figure rose slowly from the abyss, and its wings threw blackness over the world. High upward to the throne of the discontented star sailed the fearful shape, and the star trembled on his throne when the form stood before him face to face.

And the shape said, "Hail, brother!—all hail!"

"I know thee not," answered the star: "thou art not the archangel that visitests the kings of night."

And the shape laughed loud. "I am the fallen star of the morning.—I am Lucifer, thy brother. Hast thou not, O sullen king; served me and mine? and hast thou not wrested the earth from thy Lord who sittest above and given it to me by darkening the souls of men with the religion of fear? Wherefore come, brother, come; —thou hast a throne prepared beside my own in the fiery gloom — Come. The heavens are no more for thee."

Then the star rose from his throne, and descended to the side of Lucifer. For ever hath the spirit of discontent had sympathy with the soul of pride. And they sank slowly down to the gulph of gloom.

It was the first night of the new year, and the stars sat each on his ruby throne, and watched with sleepless eyes upon the world. But sorrow dimmed the bright faces of the kings of night, for they mourned in silence and in fear for a fallen brother.

And the gates of the heaven of heavens flew open with a golden sound, and the swift archangel fled down on his silent wings; and the archangel gave to each of the stars, as before, the message of his Lord; and to each star was his appointed charge.

And when the heraldry seemed done there came a laugh from the abyss of gloom, and half way from the gulf rose the lurid shape of Lucifer the fiend.

Thou countest thy flock ill, O radiant shepherd. Behold! one star is missing from the three thousand and ten.

"Back to thy gulf, false Lucifer!—the throne of thy brother hath been filled."

And lo! as the archangel spake, the stars

beheld a young and all-lustrous stranger on the throne of the erring star; and his face was so soft to look upon, that the dimmest of human eyes might have gazed upon its splendour unabashed: but the dark fiend alone was dazzled by its lustre, and, with a yell that shook the flaming pillars of the universe, he plunged backwards into the gloom.

Then, far and sweet from the arch unseen, came forth the voice of God,—

"Behold! on the throne of the discontented star sits the star of hope; and he that breathed into mankind the religion of Fear hath a successor in him who shall teach earth the religion of Love."

And evermore the star of Fear dwells with Lucifer, and the star of Love keeps vigil in heaven.

THE THREE RINGS.

FROM THE DECAMERON OF BOCCACCIO.

SALADIN was so brave and great a man, that he had raised himself from an inconsiderable person, to be Sultan of Babylon, and had gained many victories over both the Turkish and Christian princes. This monarch having in divers wars, and by many extraordinary expenses, run through all his treasure, some urgent occasion fell out, that he wanted a large sum of money. Not knowing which way he might raise enough to answer his necessities, he at last called to mind a rich Jew of Alexandria, named Melchizedeck, who let out money to interest. Him he believed to have wherewithal to serve him; but then he was so covetous, that he would never do it willingly, and he was unwilling to force him. But as necessity has no law, after much thinking which way the matter might best be effected, he at last resolved to use force under some colour of reason. He therefore sent for, and received him in a most gracious manner, and making him sit down, he thus addressed him: "Honest man, I hear from divers persons that thou art very wise, and knowing in religious matters; wherefore I would gladly know from thee which religion thou judgest to be the true one, viz., the Jewish, the Mahometan, or the Christian?" The Jew (truly a wise man) found that Saladin had a mind to trap him; and perceiving that he must gain his point should he prefer any one religion, after considering a little how best to avoid the snare, his invention at last supplied him with the following answer. "The question which your Highness has proposed is very curious; and, that I may give you my sentiments, I must beg leave to tell a short story. I remember often to have heard of a great and rich man, who, among his most rare and precious jewels, had a ring of exceeding great beauty and value; and being proud of possessing a thing of such worth, and desirous that it should continue for ever in his family, he declared, by will, that to which soever of his sons he should give this ring, him he designed for his heir, and that he should be respected as the head of the family. That son to whom the ring was given, made the same law with respect to his descendants, and the ring passed from one to another in a long succession, till it came to a person who had three sons, all virtuous and dutiful to their father, and all equally beloved by him. And the young men knowing what depended upon the ring, and ambitious of superiority, began to entreat their father, who was now grown old, every one for himself, that he would give the ring to him. The good man, equally fond of all, was at a loss which to prefer; and, as he had promised all, and being willing to satisfy all, privately got an artist to make two others, which were so like the the first, that he himself scarcely knew the true one; and at his death gave one privately to each of his sons. They afterwards all claimed the honour and estate, each disputing them with his brothers, and producing his ring; and the rings were found so much alike, that the true one could not be distinguished. To law they then went, which should succeed, nor is that yet decided. And thus it happened, my Lord, with regard to the three laws given by God the Father, concerning which you proposed your question: every one believes he is the true heir of God, has his law, and obeys his commandments; but which is the right is uncertain in like manner as of the rings."

Saladin perceived that he had escaped the net which was spread for him: he therefore resolved to discover his necessity to him, to see if he would lend him money, telling him at the same time what he designed to have done, had not his discreet answer prevented him. The Jew freely supplied him with what he wanted. Saladin afterwards paid him with a great deal of honour, made him large presents, besides maintaining him nobly at his court, and was his friend as long as he lived.

FACTS.

FROM THE BIBLE OF REASON.

RELIGION embodies all its force in terror and mystery, and acknowledges no natural cause for the attainment of moral excellence, and no natural effect in the punishment which falls upon moral delinquency. The natural system of moral obligation arising out of the social relations of individuals in society, and the knowledge of the invariable order of things, presents a check to bad actions and inducements to good, through the effects which either are calculated to produce on ourselves, on our friends, or on the community. Religion calls for atonement to "God;" moral justice and common sense recommend that efficient atonement, the object of which is, satisfaction to the aggrieved, and an humble sense, or acknowledgment of error, where such is called for by the nature of the transgression.

In nothing do the priests injure the people more than by inculcating the pestiferous doctrine, that privation and poverty are favourable to VIRTUE—that endurance and submission are VIRTUES. This doctrine of the necessity of 'worldly' privations—sacrifice and suffering—in order to ensure 'eternal life,' is at once the most absurd, the most mischievous, that ever was imposed. 'Clergymen' teach mankind to forego their most pleasing duties, to hate this goodly existence, to suppress all the warm desires of the passions, and to sacrifice 'this life' for 'the life which is to come.' For ages have the priests been teaching the poor to remain CONTENTED 'in that STATION of life,' as they say, 'to which it hath pleased God to call them.' Can any but a priest-enslaved public put the two facts in juxta-position, the preaching such absurd doctrines and the reaching so intently after the possession of wealth and its attendant influence by the preachers, without being instantly convinced that they have had their effect, and that actually the elevation and power of the priesthood have tended to debase and vitiate the people.

In every country where ecclesiastical power prevails, the spirit of liberty is depressed. This axiom might have been pronounced even in remote ages, and it has held good in successive periods. One party has governed by the use of terrific agents, another by the employment of crafty measures: here the power of the inquisition has been employed, and there the most grovelling impositions practised; in one land the magnificent ceremonial has been summoned to dazzle the senses of the multitude, and in another, the most severe austerities have been effected, in order to win their admiration and excite their zeal;—whilst in those countries in which the institutions forbid the practice of such follies, the might employed by the priesthood has been that of INFLUENCE, both direct and indirect, and by the means of which a force has accumulated, exercising an immense effect not only upon the manners of the people but frequently upon the proceedings of the government. All these circumstances operate very differently, although tending to the same end.

It is now 217 years since the dungeon gates of the inquisition closed upon Galileo, and if we may judge by the vials of theological wrath from time to time poured out upon the heads of geologists, the world has not grown much wiser since. The harmony of PHISICS and 'DIVINITY' would seem as important and as strongly insisted on as before superstition vailed to truth. Astronomy has had her system-makers who constructed untenable hypotheses, to force natural phenomena to agree with 'holy writ;' and the sister science has not been wanting in votaries who would make the first chapter of 'Genesis' her procrustean bed. Yet those to whose peculiar province such inquiries belong, are not themselves all agreed upon the authenticity of those same chapters. Some 'divines,' and learned men too, hold the INSPIRED portion of the Old Testament to commence with the 'call of Abraham.'

Nothing more remakably distinguishes the religious state of mankind in our times, as compared with any other eras concerning which history enables us at all to form an opinion, than the air of dotage which belongs, without exception, to every one of the leading superstitions of the nations. In comparing the present and the past religious conditions of all classes of the human family, it is quite manifest that the dimness and incertitude, and the terrors of extreme age, have come upon all their superstitions. All the old idolatries have become superannuated, and are decaying with age. The force of the fanaticism they once engendered is spent. There have been times when, if some were on their wane, others were in full vigour, or just starting forth from their cradle with giant strength. During the lapse of the last four-and-twenty centuries this as been the case in each period. In each there was one or more forms of religious imposture which very firmly grasped the minds of the nations that were its vic-

tims. Although our knowledge of the human race is now incomparably more extensive and accurate than ever has been heretofore possessed, we can descry in no direction a young, and hale, and mantling religious delusion, such as threatens to become invasive, or which attracts the eyes of mankind by the signal proofs it is giving of its sway over the imagination, and over the turbulent passions of our nature. The contrary is the fact, and it is so in every zone. It is conspicuous that the 'DEMONS' are holding the reins of their power with tremulous hand; they are less the objects of terror, and are less often, and less largely, propitiated with human blood and human sufferings. The spirit of counsel and might has left them; the spirit of adventure and of bold assumption has also departed. It seems as if there were neither concert nor courage in the halls of 'spiritual' dominion. The priest is less a despot than he was, and more a mercenary; yea, and symtoms have appeared, even among the 'reverend' classes, of incredulity and reason.

The literature, by which prejudice is superseded, has hitherto existed only as the portion of a few. The many have been kept in darkness and deprived of its illumination. For society to succeed to its possession, it will be necessary that the general system of policy shall become favourable; that every individual shall have leisure for reading and reflecting, and that there shall be no commanding or over-weening species of public institution which, having falsehood for its basis, shall counteract its progress.—Yet there are those who view the dissemination of instruction with apprehension, and suppose that it will turn the minds of artisans and labourers from their necessary employments. Neither does the comparison between the happiness and misery, the morality and the vice, of the instructed and uninstructed—a comparison so much in favour of the former—destroy the prejudice. That the novelty of instruction gives some inexperienced minds exaggerated notions of their own importance, can easily be imagined; but a habit of knowledge will dispel these conceits. The results of education of the poor will be to teach them that there are hardships in life, his share in which it is the duty of every man to endure patiently.

SUPERSTITION.

BY LORD BACON.

IT were better to have no opinion of God at all, than such an opinion as is unworthy of him; for the one is unbelief, the other is contumely; and certainly superstition is the reproach of the Deity. Plutarch saith well to that purpose: "Surely," saith he, "I had rather a great deal men should say there was no such a man at all as Plutarch, than that they should say there was one Plutarch that would eat his children as they were born;" as the poet speaks of Saturn: and, as the contumely is greater towards God, so the danger is greater towards men. Atheism leaves a man to sense, to philosophy, to natural piety, to laws, to reputation: all which may be guides to an outward moral virtue, though religion were not; but superstition dismounts all these, and erecteth an absolute monarchy in the minds of men: therefore atheism did never perturb states; for it makes men wary of themselves, as looking no farther, and we see the times inclined to atheism (as the time of Augustus Ceaser) were civil times: but superstition hath been the confusion of many states, and bringeth in a new "primum mobile," that ravisheth all the spheres of government. The master of superstition is the people, and in all superstition wise men follow fools; and arguments are fitted to practise in a reversed order. It was gravely said by some of the prelates in the council of Trent, where the doctrine of the schoolmen bore great sway, that the schoolmen were like astronomers, which did feign eccentrics and epycicles, and such engines of orbs, to save the phenomena, though they knew there were no such things; and, in like manner, that the schoolmen had framed a number of subtile and intricate axioms and theorems to save the practise of the church. The causes of superstition are pleasing and sensual rites and ceremonies; excess of outward and pharisaical holiness; over great reverence of traditions, which cannot but load the church; the strategems of prelates for their own ambition and lucre; the favouring too much of good intentions, which openeth the gate to conceits and novelties; the taking an aim at divine matters by human, which cannot but breed mixture or imaginations: and, lastly, barbarous times, especially joined with calamities and disasters. Superstition, without a veil, is a deformed thing; for as it addeth deformity to an ape to be so like a man, so the similitude of superstition to religion makes it the more deformed: and, as wholesome meat corrupteth to little worms, so good forms and orders corrupt into a number of petty observances. There is a superstition in avoiding superstition, when men think to do best if they go farthest from the superstition formerly received; therefore care should be had that (as it fareth in ill purgings) the good be not taken away with the bad, which commonly is done when the people is the reformer.

London: Hetherington.

THE CONDITION OF MORTALITY EXAMINED.

BY WILLIAM BURDON.

Man, never satisfied with the present, is always looking back to what he has been, or forward to what he is to be; the propensity to the former, however, is not so general as that to the latter. Few have adopted the system of Pythagoras, compared to those who believe in a future existence, yet the one is not more difficult to prove than the other. Mankind are apt to fall into two extremes with regard to the future; some think too little about it and some too much; true wisdom lies between the two. The evil that is never thought of is borne with difficulty, that which is forseen becomes lighter. We cannot fly from fate, it is wise therefore to be forewarned of its arrival. A modern author of considerable acuteness, maintains that it is impossible to account for the evils of the present life without supposing it to be a state of punishment for sins committed in a former state, and of probation towards a future; whether he was serious it is difficult now to determine; if he was, it would be easy to prove his argument ridiculous; and if he was not, we must admire the keenness of his irony. The strongest argument against a prior state of existence, is that we are not conscious of it, and to be punished for what we have no knowledge or remembrance of at the time we are punished, can have no tendency towards our amendment, which is, or ought to be, the great object of punishment. On the other hand, those who believe in a future state, to be consistent, ought to believe in a past; for if the soul of man is capable of existing to all eternity, it is difficult to conceive how it could have had a beginning; for that which is eternal ought no more to be limited at one end than at the other. But though a future state of existence is barely probable, a past one is impossible; the idea disproves itself; for if we have existed, it has been to no purpose, as it leaves no remembrance. The arguments for a future state having some probability on their side, have obtained a very gneral reception, and being attended also with some apparent advantage to mankind, will not easily be discredited among the multitude, but those who judge and act from a regard to the real state of things, and not from false appearances, will probably listen to the contrary arguments by which they may be disproved. The direct proof of a future state can only be derived from the word of God, or a divine revelation; but we have no revelation which does not contradict both the evidence of the senses and of experience; independent of revelation, therefore, the belief of a future state must rest solely on probability. The analogy of nature, it is said, points out to us this probability from the several changes we have already experienced; but this analogy is defective in not referring to a state of past existence, because, could such a state be proved, the analogy would be rendered much stronger than by merely stating the changes which have happened in the present, for they contain no analogy at all with reference to a future state, and can only be applied to the probability of still greater in the present. The destruction of the vital functions puts an end to all hopes arising from analogy, unless it could be proved that this life is a resurrection from a former state of existence; but so far from having a consciousness of any prior life, we are even ignorant of what happened to us in the early part of our present existence; it seems then that a principle or essence, which was at first so weak and indistinct, can hardly be intended for immortality; it is not fair, therefore, to conclude that we shall be immortal merely because we wish to be so. The argument taken from the analogy of the scriptures to the constitution of nature, is equally defective, because it is requisite that in all analogical reasoning the things which we reason about should exactly resemble each other; thus, to argue that the sun will rise to-morrow because it has risen for a thousand years, is a fair analogy, because the cases are exactly similar; but to argue that there must be difficulties in the scriptures because there are difficulties in the order of nature, allowing them to be from the same author, is a false analogy, because the things do not resemble each other, and besides it takes for granted that the scriptures are the word of God, which is by no means proved. To argue from what we see here, to what we expect hereafter, is no more warranted than to suppose that because a man has lived sixty years he will live a hundred.

The argument for a future life derived

from the evils and injustice of the present, rests solely on our ideas of the Divinity, which are by no means capable of proof, and therefore has not much tendency to strengthen that which was originally weak. To argue from what is defective to something complete, is a very liberal mode of argument, but hardly warranted by the laws of sound reasoning. We might as well suppose that because a watch-maker has formed a very bad watch, he can therefore make a very good one. To those who infer a future state of rewards and punishments, from the prosperity of the wicked, and the sufferings of good men, it is easy to reply with this strong fact—The wicked are not always so happy in this world, nor the good so unhappy as some men imagine, and vice is nine times out of ten its own punishment. The belief of a future state tends considerably to weaken the efficacy of morality, for they who have been early accustomed to act from no other motive than a fear of punishment, should that ever be removed or forgotten, will never believe that to restrain their appetites and passions, is most comformable to their duty and their interests.

Our notions of a future state derive their origin and strength from that love of life which grows up with man and makes him unwilling to leave it, and so he soothes himself with the idea of another, as children are enticed to part with their playthings by telling them they shall have others in their stead; it is strengthened also by that vanity and presumption which make us believe that we hold a higher rank in the universe than we actually do. Our powers and faculties are great no doubt, compared with those of beasts, yet nothing compared to the universe around us, of which we neither can comprehend the cause, the nature, nor the end. And after all, what are the boasted privileges and superiority of man; he is born with faculties capable of almost unlimited improvement, but for all this he is only one degree removed from a monkey; he comes into the world in a mode both indelicate and distressing, a mode which requires some such apology as that contained in the book of *Genesis* or *Generation*, c. 3. v. 16.—he continues in a helpless state much longer than any other animal; through disease of body or mind he often drags on a miserable existence and wishes he had never been born. Some men, however, arrive at maturity both of body and mind, and others attain to the highest excellence of their nature by the improvement of their rational powers; but the greater part perish in a state of comparative nonentity, before they have acquired the faculties or bodily strength which are common to their race, and many others without having obtaned a proper improvement of their rational faculty. Others die, apparently of little consequence to the rest of the creation, and are carried off in the prime and vigor of their existence, by war, by pestilence, and famine; and even those whose lives seem to be of the greatest importance to their friends and fellow creatures are suddenly removed from the sphere of their usefulness, and reduced to a lifeless lump of mortality; of so little value is human life in the system of the universe. One should think this might teach us humility, might teach us to be content with our present state, to improve our present existence, and cease to soar after a distant and uncertain being, which must in every respect be independent of anything we do here, as the present is of anything that may be past. We know not what we have been, nor what we shall be, we only know what we are.

The belief of a future state derives its greatest strength from the miseries of mankind; for it is natural that those who are wretched here, should console themselves with the hopes of happiness hereafter, and far be it from me to rob any man of such consolation, without attempting to give him something in return. While such hope has the effect of soothing the afflicted, it cannot wholly be condemned; yet it is much to be desired that men should derive their comfort from the exertion of their reason, rather than from the indulgence of their fancy, and either submit themselves patiently to the evils of their present lot, or endeavour to improve their condition by enlightening themselves and their fellow creatures. All inquiries into a future state have hitherto only produced tumult and confusion, for they who once possess themselves of a belief on such a subject, are jealous of having it disputed, and unwilling to suffer others to differ from them; they have, therefore, constantly endeavored to enforce it by penalties and persecution, and kept the world in arms to support their opinion. Religion is a subject of too high a nature for the faculties and temper of man to be trusted with; he must therefore content himself with what he sees established by the order of nature, and with the improvement which his faculties enable him to arrive it. The knowledge of his relations to his fellow creatures is the great object of his duty; a knowledge of his relations to other beings he can never acquire. To be just, temperate, affectionate, benevolent, and discreet, is the sum total of morality, and the sanction by which it is enforced, is the general happiness it produces even in the present world.

To be inquisitive or fearful about another is the extremity of folly, for if there is another, it must be as little in our power as the present was before our existence; and yet some people think that the belief of future punishment has the happy effect of frightening men into virtue and morality. Poor and pitiful indeed must that man be who does not act from a superior motive, from the fear of shame, from a love of rectitude, or a regard for his fellow creatures. A rational man, under the pressure of the greatest calamity, tormented by distress or ill health, will console himself with the reflection that he lives under the dominion of an inevitable necessity; he will endeavour by the exercise of his mental faculties, to act to the best of his judgment in whatever difficulties he is placed, and then, if he finds them insurmountable, he will wait with patience, for relief in that state of nothingness from which he came, and to which he must return, "where the wicked cease from troubling, and where the weary are at rest;" where the happy and the wretched, the oppressor and the oppressed, lie down together in eternal repose. Dismissing, therefore, all ideas of a past or a future existence, and considering the one as impossible, and the other improbable, let us examine the present state of man, and how he is circumstanced with regard to his physical and social state, and how far each is capable of being improved.

The natural state of man is so much meliorated by the arts of civilized life, that he has become almost another creature. Whether these arts have reached their utmost limit remains yet to be proved; hitherto they have enabled man to conquer many of the evils of nature, but many are yet to be subdued; whether he can ever subdue them, time alone will determine, but if we argue from what has been, to what may be, we must conclude that much yet remains before man has arrived at the utmost limit of improvement.

Man, in his physical and social capacity, is placed under the law of a rigid necessity, both in things external and in his own actions; the former he cannot control, but the latter allows the fullest exercise of his faculties; to himself, therefore, he seems to be free, and he is so, to act according to the motives which determine his choice. The power of choosing to do one thing in preference to another appears to be free will, but in fact is necessity: it is influenced by a motive.

Destruction is the first law of nature, and all things are kept in a state of perpetual rotation. Matter is continually taking different forms though nothing is lost on the whole. The first propensity of children is to destroy whatever is in their power, and were not this propensity counteracted by the increase of their own reason, and the control of those around them, they would never arrive at maturity. Animals live by the destruction of each other, and men by the destruction of animals; yet this extinction of matter is not real, but apparent. The same particles which form a human body, may in time be converted into air, and become the nourishment of plants; some substances are longer in being dissolved than others, but all finally change their shapes, and are converted into other shapes. It is this constant state of mutation which has given to man the idea of a creative power. That God, who is a spirit, created matter out of nothing, is more difficult to conceive than that matter has existed from eternity, for matter is real and tangible, and we are convinced of its existence by the evidence of our senses, but there is no evidence to prove the existence of spirit; it is a mere creature of the mind, and therefore its creative power rests only on supposition. Nothing is created but in our imaginations; all other things exist by an inherent necessity, and that necessity has neither beginning nor end. To create is to bring into existence something which never existed before, and where is the being in the universe endued with such a power. Is it a spirit? What is a spirit? Did it create itself? How could it? Is it matter? How could dull torpid matter bring itself into existence? That it exists and has existed from all eternity, is the only rational supposition by which we can account for its existence, but as we know nothing for certain, the less we say about it the better, for the subject exceeds the limits of our faculties.

The seeming waste of existence which pervades every part of the creation, cannot fail to excite the wonder and surprise of rational beings. Millions of animals are born one day only to die the next, and millions more are born without arriving at maturity; for what purpose this can have been intended, suits not our faculties to determine; we can only say it does not accord with our ideas of wisdom and benevolence.

The terraqueous globe has undoubtedly undergone many changes, and therefore, instead of supposing that there has been only one deluge, we are at liberty to suppose there may have been a hundred, for if such an event had not almost entirely destroyed the race of man, there is no reason can be given why we have no arts, no sciences, and nothing but a traditionary account of the world, beyond that period. The supposition of some such calamity can alone account for the small extent of civilization,

and allowing the eternity of matter, if there has been one, there may have been many preceding that, of which alone we have any account. The greater part of the known world remains at present in a state of barbarism, and even in those countries which are said to be civilized, the comforts of life are very sparingly distributed, which in general arises from the unequal and partial division of property, and the injustice of governments; but even were these adjusted upon the best and most equal principles, there still remains a great limit to improvement in the condition of man, from the tendency of population to increase beyond the means of subsistence. The principle of population, when left unrestrained by other checks, is productive of vice and misery, and to restrain it properly we must submit to many privations; the great art is to balance the two evils as nearly as possible, so as to avoid the greater misery. War, pestilence, and famine, are the natural correctives of a redundant population; prudence and self-denial are the artificial checks which are administered by reason; from hence it will appear that man can never be completely happy; the most he can do is to mitigate the evils of his present state; the only means afforded him of doing this is by the exercise of his reason, but as man is formed to imagine more than he can realise, he can never be happy to the utmost extent of his ideas. Imagination will always furnish something which can never be realised.

Though many of the evils of nature have been mitigated by a state of society, yet these are counterbalanced by many other evils almost equally great, so that the miseries of human life far outweigh its happiness. Many wants and diseases have been introduced which are unknown to the savage state, and the operations of nature are in many instances counteracted, restrained, and perverted; health is often sacrificed to fashion, interest, or pleasure, and many suffer by hereditary diseases, so that life is rendered burdensome by a protracted state of misery. Men contrive to torment each other in various ways which are unknown in a more barbarous state of society; the finest specimens of art, genius, and learning, are often purchased at a very dear rate, by those who produce them, from the envy of competitors, the neglect of the world, and the loss of health; and even the ties of consanguinity are loosened by the collision of interests, so that the nearest relations are seldom the best friends.

The evils to which men are naturally subject may, however, be diminished by prudence and moderation, but the love of wealth tempts them to brave the violence of the elements, the dangers of climate, and even the certain destruction of pestilence; were men less eager to obtain wealth, or more careful of the lives of their fellow creatures, many of these evils might be avoided or lessened; it is not, however, merely the love of wealth that tempts men to these dangers, but even the necessity of a subsistence. The savage can procure himself a living in his own country by his bow or his sling, but civilised man, in order to satisfy the wants of nature in himself, and the artificial wants of luxury in others, must subject himself to many unwholesome employments, to many perilous trades, and even to the certain loss of life. Here the savage has certainly an advantage over many of the lower ranks in civilized society, but neither state is devoid of its attendant evils; yet were men less ambitious, less avaricious, or less fond of luxuries, they might be content with many things which cannot be purchased without the misery or destruction of their fellow creatures. On the other hand, what is life? for it seems as if in the order of nature, that even a small portion of the luxuries and enjoyments which the world affords, could not be procured without the prodigal waste of it in many human beings. Nature does not seem to have set a very high value upon human existence, when so many are found requisite to be sacrificed to the luxury, or even the comfort, of a few; and every period of civilized society, will bear testimony to the truth of the remark, for even the commonest article of use is not procured without the loss of many thousand lives in the employment. Sugar is an article notorious for the great consumption of human lives which it costs, and all commodities brought from foreign countries occasion the destruction of thousands by shipwreck, by loss of health, and various calamities; others are not even brought from the bowels of the earth without causing a very great mortality. Such calamities can never be wholly avoided in a state of society —a state so far preferable to the unsocial life of a savage, as to make these evils disappear, when it is considered how much comfort and pleasure they procure for the survivors. I only mean to say, that they may be in some degree lessened. In no one country, at any period of the world, have all, or even half the men of that country, arrived at that state of improvement and happiness for which by their nature and faculties they seem intended, or their soil and climate are capable of affording. The advantages of both have been wasted and squandered.

War, which has hitherto desolated the habitable globe, is common to both the natural and civilized state; whether it is less

destructive in the former or the latter, seems not hitherto to be determined, yet the fact is not to be disputed, that no nation of which we have any account has ever been at peace for thirty years together, though many have been at war for that period. War, therefore, seems the favourite employment of man, and as it is in some measure requisite to keep down a redundant population, it will probably never be entirely banished from the world; it certainly, however, gives us no very favourable opinion of a system in which it is an indispensible ingredient.

Man, in a savage state, is a totally independent being, he does every thing for himself; whereas the social man, from the highest to the lowest, is in different degrees dependent upon others for the supply of his wants, his pleasures, and his comforts; this difference is solely created by property. The pleasures of the savage are simple, almost to monotony, and inseparably connected with his wants, while those of society are factitious and varied in infinite degrees; yet there are some which, to the disgrace of civilization, partake in a great degree of savage ignorance and ferocity, and it is not too much to say, that the generality of mankind reject the refinement which society places within their reach. The lower ranks of people in all countries are little better than savages in their manners, their minds, and tempers. Connected with society only by the wants of their superiors, and restrained from plunder and rapine only by the pressure of authority, they seem to be tied to those above them by the force of law, rather than united by a community of interest; while this continues to be the case, civilization is not complete, and society is rather a forced union than a friendly compact. Men are by nature savages. *Homo homini lupus*, well describes the species—for though somewhat tamed by society and education, we are impelled by nature to prey upon each other, in a savage state literally, for there are yet *anthropophagi*, or men eaters; in a civilized state we prey upon each other's property and comfort. So far we harmonize with the rest of the creation, for all living creatures live by the destruction of life either animal or vegetable. And yet such is the power of education, that it is capable almost of changing the nature of man.

Equality of property is by no means the indispensible cement of society—it is directly the reverse, for its tendency seems rather to create a savage independence, concentrating each man in himself, than to establish a state of general exertion arising from reciprocity of interest. When every man is sufficient for himself, he has no need of the aid of others; but the variety of our wants and pleasures brings men together into a state of mutual dependence and general harmony. The most desirable period of society is that in which nature, corrected and improved, is the foundation of our habits, pleasures, and institutions; for though the social man is almost a factitious animal, it is possible for him to unite a regard for the simple dictates of nature, with the pleasure derived from the utmost exertions of art. When nature is entirely abandoned, and every valuable propensity which she implants is sacrificed to the prevalence of fashion, or to the influence of whim and caprice, man is no longer in a state to enjoy the happiness of which he is capable, but becomes from that moment the slave of others, and of his own vanity, presumption, and ignorance. He adopts a mode of living which is utterly inconsistent with every end and purpose of a rational being, and perverts the first great object of society, which is mutual comfort and general improvement. To live agreeably to nature, without despising the conveniences of art, is to unite the natural and the civilized state as far as they are capable of coalescing together, and seems to promise a degree of improvement equal to the highest excellence of our nature.

Longevity, simply considered, is not a desirable possession. To extend a mere existence, or a life of disease, is not to be wished for, by any rational being; yet such is the nature of man, that it requires an uncommon degree of misery to conquer the love of life—a propensity which is beneficial to the species, though not to the individual. To prolong a life that is useful and pleasant, is one of the best gifts of nature, of fortune, or of prudence, but certainly one of the rarest, for the best and most estimable of mankind have generally the worst constitutions, and can hardly, by the most rigid self-denial, extend their term to the common length of human existence. On the other hand, there are some, who, by their internal strength and vigor, defy even vice and intemperance for a very long period. The constitution of our bodies generally depends upon our parents; it is therefore fortunate for the greater part of mankind, that those who lead the most intemperate lives, beget their children before their vices have taken such hold upon their constitution as to propagate disease; but in other instances, which too frequently happen, hereditary malady, united to personal imprudence, adds to the general stock of disease and misery, which deforms the fair face of civilized society. The longevity of the savage is more rare than that of the social man; the inclemency of the seasons, the violence of climate, and the alternate extremes of

labour and repose, exhaust his natural strength at an early period. Moderation in all things is the law of enjoyment, and therefore those of the lower ranks of society who are moderately fed, and use moderate exertion, or even those who lead a life of hard labour, generally live the longest, and those who live in a cold climate more so than those of a hotter; yet, in all climates, those who are free from the corruption of hereditary disease, and live according to the rigid rules of morality and prudence, stand the best chance for longevity. The pains and pleasures of the savage are few, he is therefore little in the power of fortune, and is chiefly affected by the elements; the relations of civil life create a variety of pleasures, but they also bring with them an infinity of troubles. The loss of friends, the collisions of interest, the attacks of disease, are all considerable diminutions of the comforts afforded by civilization. Suffering is the lot of every human being, in different degrees and proportions.

The operations of nature and the actions of men are nothing more than certian causes producing certain effects by an inevitable necessity. Man may murmur, but he must submit to a disposition of things the most apparently unjust; he must submit to see virtue insulted and degraded, while vice and folly are triumphant; to see youth, beauty, and talents sink into the grave, while age and decrepitude live to torment and be tormented; to see money heaped upon the worthless, and the worthy oppressed by poverty; all this happens in the regular course of things, but to whom it happens is the effect of chance. I have suffered much from the delicacy of my own feelings, and the want of feelings in others. The idea of nations and individuals being punished for their actions, arises from that barbarous theology which represents the Deity as a revengeful and malicious being, who delights in the sufferings of those whom he has created, and hardens merely to punish. It is a narrow, bigoted, and illiberal sentiment, the remnant of Jewish divinity, and unworthy of Christians or rational beings; for, philosophically speaking, all the events of the world are but the result of natural causes, into whose origin we are not able to penetrate. Let those, therefore, who pronounce thus harshly on the measures of a being whose nautre they are unable to comprehend, be taught humility and submission from the consideraton of their limited faculties, and forbear to judge decisively where they are not supplied with the means of decision. The purposes for which the events of the world are established can never be known by human nature, they are infinitely beyond our reach; all systems, therfore, which pretend to account for what cannot be accounted for, are defective in this material particular, that there is a limit to their researches which they cannot pass, and therefore they only wander in folly when they attempt to explain what can never be developed. And yet no man who looks at the history of the world, either in past or present times, can deny that it has been and is a vast theatre of crimes, of murders, massacres, usurpations, and intrigues, occasioned by the passions of mankind. Who then will say that it is governed by a Being infinitely wise and benevolent? A Being who causes so much evil cannot be both wise and good. Divines tell us that God does not cause these things, he only permits them; this is a distinction without a difference. Humanly speaking, the misfortunes of mankind are the effects of their own imprudence, philosophically speaking, they are the result of an inevitable necessity, for one course of action naturally leads to virtue and happiness, and another to vice and misery, and these are the result of just or false calculations, which are founded on the immutable and eternal relation of things.

Mankind, in their various stations, act from a variety of motives, and he who is actuated by the most worthy, will eventually do the most good to himself and to society. There are many substitutes for virtue which are sufficient for the common purposes of life, and the generality of mankind; the restraints of law, the force of opinion, the prevalence of custom, the love of reputation, and even the forms of honour, supply the place of virtue, so as to keep society togethe. Virtue, or the love of rectitude, is the only satisfactory motive, and the only means of rendering mankind completely happy, but happiness does not seem to have been the end for which the universe was formed, yet in all creatures the desire of it is strongly implanted, and this desire engages man, above all others, in a constant struggle with the evils of nature and of society. Man cares a great deal about Nature, but Nature cares very little about man, she torments him in various ways while living, and finally puts an end to his existence. The highest excellence which he seems intended to arrive at, is an almost unlimited improvement in knowledge, and so far as this confers happiness, he may be happy; but it is a sort of happiness which consists more in the pursuit than in the acquisition; whether a future life will confer on him more substantial bliss, he never can determine; it seems a sort of Pisgah prospect, which he can enjoy only by the force of imagination. Nature, we are told, has intended all things for the best, but it must be allowed, that she has given to the generality of men no

very valuable present when she gave them existence, and that those who are unhappy without any fault of their own, have a right to complain of injustice and cruelty. The existence of one miserable being in the world, is an invincible argument against the belief of a Deity, infinitely wise and benevolent. The laws of Nature are either fixed and invariable, or they are dependent on the will of a capricious Being—if that Being is not capricious, then his will is in conformity to the laws of Nature, and Nature and God are one. Man may conceive the existence of an independent Being, but he can never prove it. To create the world from nothing, is more inconceivable than that it has existed from eternity.

Though the evils of life must be severely felt by men in all stations, and by some more than others, there are not wanting arguments of great weight to reconcile us to their pressure, independent of any religious consideration; of all these the most powerful is their inevitable necessity; for such is the nature of man, that we readily acquiesce in whatever we persuade ourselves is without a remedy, or happens to us independent of our own conduct. Much consolation may also be derived from seeing that our lot is not singular, but that all are subject to calamity, and that many suffer more severely than ourselves. It also is no small comfort to have it in our power to think, that whatever may befall us, we have done our utmost to make others happy; and that though we have failed in acquiring happiness ourselves, we have not contributed to make the world worse than we found it, but have increased the general sum of virtue and knowledge; and though we should not presume to consider ourselves more than mere mechanical agents, composing part of an immense universe, we at least may rejoice that we have been instruments of good, for the promotion of happiness and morality. By reasoning thus, we are more like rational beings than by flying for consolation to the hope of uncertain futurity: but whether we are religious or whether we are merely moral, does not depend on ourselves; the consolations and the terrors of religion are not in our own power and arise from circumstances over which we have no control, they are more the result of imagination than of reason, but at any rate they are no more of our making, than we are makers of ourselves—God, is said to be an uncreated Being, but all the world is uncreated, and has to my idea existed from all eternity.—The operations of nature in some instances produce good, and in others evil, and therefore cannot proceed from infinite benevolence. The instinct of animals is said to be an admirable proof of divine wisdom, but it is no more so, than that fire should burn, or water quench it. The formation of the human body shews a wonderful adaptation of different parts to different useful ends, but they are as well adapted to produce pain when out of order, as pleasure when they perform their functions. The formation of stones in the kidneys and gall bladder, tends immediately to the production of exquisite pain, from the smallness of the passages through which they are forced—therefore to argue for the wisdom of providence from what is good, and neglect to consider what is defective, is a very partial mode of reasoning. All that can be said with safety on this subject is, that the universe is sufficient to excite the wonder and admiration of man, and when I am asked who made it, my answer is "I cannot tell."

Men are not what they seem any more than women, and the generous savage, unaccustomed to represent things otherwise than as they are, starts with surprise at the deceptions which men practise on each other; for such is the sophisticated state of civilized life, that no man is to be believed for his words, but rather to be suspected of intending the contrary to all that he professes. The world is full of fraud, deceit, and selfishness, and he who wishes to acquire any tolerable share of its comforts must be constantly on his guard against the arts of his competitors, and he who is born to hereditary wealth must be equally careful. Health and reputation are the most valuable possessions, but money is not to be despised, and he who neglects to acquire or preserve it must not wonder if he is neglected. The world cares very little about individuals, individuals therefore must take care of themselves, and if they wish to be respected, must study to acquire those things which will always ensure repect, namely—character and money.

DESPOTISM.

BY EDMUND BURKE.

THE simplest form of government is despotism, where all the inferior orbs of power are moved merely by the will of the supreme, and all that are subjected to them, directed in the same manner, merely by the occasional will of the magistrate. This form, as it is the most simple, so it is infinitely the most general. Scarce any part of the world is exempted from its power. And in those few places where men enjoy

whence such diversity of judgment? It is accounted for simply by this fact, that men judge of things precisely as they appear to them; and the different judgments formed of the same things are ascribable wholly to the different degrees of strength in the faculty of perception. The truth or falsehood of the most abstruse and difficult proposition is judged of upon the same principles, for the most complex process of reasoning is reducible to acts of simple judgment; perception and judgment, therefore, appear to be alike governed by a law of necessity.

Let us now proceed, as we have hitherto merely treated of the operations of the mind, with regard to the subject under consideration, to draw attention to the causes of action. A man wills to act, and the action certainly follows the volition. But *why* does a man will to act? what determines his volition? Mr. Locke considers the volition to proceed from some pressing uneasiness. But to what must we ascribe this pressing uneasiness? Man is, as Mr. Locke has clearly shewn, endowed with sensation:—his senses are the inlets to all the knowledge he possesses. Capable of enjoying pleasure and of suffering pain, he is irresistibly impelled by motives operating upon his hopes and fears—his desires and aversions. By a law of his nature he shuns pain and pursues pleasure. If then his judgment assures him that the possession of anything will yield him pleasure, his will is immediately and necessarily determined to obtain it; if, on the contrary, any object is known to produce pain, it excites his aversion, and his will is as necessarily determined to avoid it. To satisfy ourselves that this is in reality the case, little reflection is necessary. Every thinking man, is fully aware that we are necessarily impelled to will the possession of that which is supposed to yield pleasure; and the avoidance of that which is thought to inflict pain. Here, then, it will be perceived, is a fixed *law of nature* for regulating the will as well as the other powers of the mind and body. Thus we arrive at the conclusion that the will is constantly, definitely, and invariably determined by the preponderance of motives, and that every thought and action of man is, therefore, the necessary result of the preceding circumstances. Self-preservation, which is termed (perhaps erroneously) the first law of nature, is thus efficiently secured. This point is ably stated in Morgan's Philosophy of Morals. "If," observes the writer, "external objects did not operate upon the senses according to an immutable law, but were capable of producing various effects at different times, it is indisputable that there could be no knowledge. In the same manner, if desire did not regulate reaction with a similar immutability, if the same desires might excite indifferently various modifications of action, it is obvious that knowledge (or to use the most elementary term, perception) could not contribute to the permanence of the animal it is destined to guide."—p. 70. But, notwithstanding the strength of this argument, it may, I conceive, receive additional illustration. Having shewn, I trust satisfactorily, that perception and judgment are governed by a law of necessity, I will now endeavour to shew that the will is uniformly determined in accordance not only with our preservation, but also with our gratification. Are we not instinctively or mechanically impelled, when placed in dangerous circumstances, to cling to whatever affords a hope of preservation? If it be an approaching danger, and we have time to reflect, are we less intent upon devising the means of escape? Can a man craving for food will himself to be satisfied? Or, when satisfied, will himself to be hungry. It may be asserted, perhaps, that these are physical circumstances, and no one disputes that man is subject to a physical necessity. But imagine two moral or intellectual objects presented for a man's choice, if one appear better than the other can he choose the worst? Can a passionate man will himself to be calm? No! the least consideration will satisfy us that a passionate man, though he thinks he wills with the greatest energy, is absolutely impotent of will, and is irresistibly hurried on by circumstances. Indeed, the more we examine this subject, the more strongly shall we be convinced that motives are constantly operating upon us, and impelling us to pursue pleasure and avoid pain. Any other view of the subject destroys the force of motives, and reduces the question to an absurdity—an effect without a cause. It has been well observed, that a pair of scales, perfectly poised, cannot ponderate on either side; and a man who has no motives to act will not act at all. Everything must be at rest which has no force to impel it. By casting a grain into one of the scales I make a change in the circumstances, which is immediately followed by a depression of the one and an elevation of the other; and thus it is with man—he is necessarily depressed or elevated by the variation of a grain in the circumstances in which he is placed. Belsham, in his Elements of the Philosophy of the Mind, deems it absolutely impossible for men to act differently in circumstances precisely similar; and proceeds to observe, that the reason why we cannot predict the line of conduct an individual will pursue,

with the same certainty that we can physical effects, arises from the impossibility of knowing the state of his mind and feelings. "Nevertheless," he observes, "there are cases in which the actions of man may be predicted with a precision nearly approximating to that with which we foretel the effects of physical causes. For example, it is as certain that a dishonest and avaricious man will take an undue advantage in business, where opportunity offers, as that fire will burn or water run down hill." This difficulty, however, does not attack exclusively to foretelling the actions of man:—it is equally impossible to predict natural occurrences, though they are admitted to be governed by necessary laws; for instance, we cannot tell which way the wind will blow to-morrow—the dryness or humidity of the atmosphere—and many other similar circumstances.

Mr. Collins observes, that "as all actions have a beginning, man must be a necessary agent; for whatever has a beginning must have a cause, and every cause is a necessary cause; and if any action whatsoever can be done without a cause, then effects and causes can have no necessary relation."

But an objection has been urged against the truth of the doctrine of necessity, by denying that our actions are the necessary result of motives, upon the plea that a man may choose one of two things which are exactly alike—where, as he is supposed to be perfectly indifferent, he has no motive for choosing one in preference to the other—say, one of two eggs, or apples, or pears, or other things, in all respects the same. But this is a sophistical mode of stating the case. What if the two things are precisely alike, that is but a small part of the circumstances: there is the man's disposition or inclination to take one of two; and no man will, for one moment, admit that any choice could be made if an inclination or disposition to take did not exist. Indeed, without a motive he could make no choice, otherwise we should have an effect without a cause. Mr. Locke appears somewhat confused upon this subject, and mentions the circumstance of an individual suspending his volition as a proof that he possesses liberty. Now deliberating or suspending our volitions, is no proof of liberty; because when the mind is kept in suspense between desiring and not desiring any object the final *preponderancy of desire*, necessarily determines the will, or wish to obtain it; and, on the contrary, the *prevalence of aversion* as necessarily creates a wish to decline it.

"Is it possible, then," observes the celebrated Dr. Priestley, "that a philosopher observing these constant and uniform appearances, should not conclude that the proper cause of a man's actions, are the motives by which he is influenced? Strengthen the motive and the action is more vigorous; diminish it, and its vigour is abated; change the motive, and the action is changed; entirely withdraw it, and the action ceases; introduce an opposite motive of equal weight, and all action is suspended, just as a limb is kept motionless by the equal action of antagonist muscles. As far as we can judge, motives and actions do, in all possible cases, strictly correspond to each other."

The more intelligent advocates of the free agency of man, however, having been driven from all their positions, now adopt a different mode of reasoning upon this subject. Unable to reply successfully to the convincing arguments urged against their hypothesis, they evade the conclusion by declaring that they are *conscious* that the will possesses a self-determining power; which consciousness, they affirm, is superior to all argument, and unerringly establishes the truth of their position. Let us briefly examine this position. What is consciousness? Is it not the perception of what passes in a man's thoughts? How, then, can it, in this controversy, be a test of truth? The advocate of free-will is conscious that, independently of circumstances, he possesses a power of *self-determination;* while, on the contrary, the necessarian is conscious that he is *necessarily* determined. Can we, then, with propriety, appeal to *consciousness* to establish the truth of contradictory hypotheses? The value of consciousness will, indeed, be found to depend entirely upon the strength of the faculty of perception, and the degree of knowledge we possess; and varies considerably in ignorant men and in philosophers. Vain and ignorant men are too frequently *conscious* that they possess more knowledge than profound philosophers. But what is their consciousness worth? Does it prove a fool to be a philosopher? In fact, we can only be conscious of *effects*; *causes* are beyond the reach of consciousness. We are, for instance, all conscious that we exist; but will any reasonable man adduce this consciousness to to prove *how* we exist? With as much propriety might we affirm, that this ignorance of *how* we exist proves our self-existence; as that our ignorance of the causes which govern the will proves that it possesses a self-determining power.

It will be seen that I have taken up the subject strictly on its own merits, and have briefly shewn it to be true that man is NOT a Free Agent; and have also endeavoured to establish the position, "that by a law of our nature the will is invariably and necessarily determined by the predominant mo-

tives or previous circumstances, the same action uniformly resulting from the volition, or act of willing, when the antecedent state of mind is precisely the same."

A few words must be devoted to the objections that are urged against the doctrine of necessity. It is thought by some persons, not well acquainted with the subject, that it is pregnant with very dangerous consequences. But few who have studied it sufficiently have risen up with such impressions. Some of its opponents, however, persist in asserting that the scheme of necessity leaves no foundation for praise or blame, and renders manifestly improper the application of rewards and punishments. Dr. Priestley meets this difficulty most satisfactorily. He supposes himself possessed of two sons, whom he designs to make virtuous and happy. On the mind of one of them, motives have a constant and necessary influence. It is known that the prospect of good, or pleasure, will certainly incline him to comply with his father's injunctions; while the fear of evil, or pain, will as certainly deter him from doing any thing that his father wishes to dissuade him from. The father, therefore, brings him under a course of discipline with the greatest prospect of success. His other son, he supposes to be differently constituted; motives having no necessary or certain influence upon his determinations; it is, therefore, exactly an equal chance whether his father's promises or threatenings, rewards or punishments, will determine his actions or not. Who, then, would go on adding "line upon line, precept upon precept," under such discouraging circumstances? We all act upon the principle, that the rectitude or depravity of a man's conduct depends on the impressions which he receives in his youth; and that these impressions, frequently repeated, become habits, and fix the character of the man. So far, therefore, from this being an objection to the doctrine of necessity, we perceive that praise and blame, rewards and punishments, would be unjust and impolitic, under the opposite scheme of Free Agency. Because the application of these things would be absurd if they had no necessary influence upon the will, and the consequent actions of man. What parent would be at the trouble and expense of educating a family, if he imagined there was no necessary connection between motives and conduct? Rewards and punishments, indeed, even in a national or political point of view, are, or ought to be, but curbs placed upon the desires and aversions of individuals by the judicious distribution of pleasure and pain. Pleasure and pain operating upon the hopes and fears of man, are like the banks of a river; they confine his actions to their proper channel, and prevent them from overwhelming and destroying the surrounding existences.

Another objection is, that the doctrine of necessity annihilates practical virtue, and encourages indolence and vice. No objection could be more misplaced than this; for the objection indicates an incapacity in the objector to comprehend either the nature and tendency of its principles, or its influence upon the mind and character of its votaries. So far, indeed, from this being founded in truth, those who contend for free will, or the free agency of man, protect themselves in peculiar circumstances by acting upon the very principles they repudiate. Take, for example, a notorious drunkard but an intelligent believer in the free agency of man, who has determined to reform the degrading and demoralizing habit. Will he not shun the company, and the consequent influence, of his ale-house companions? Unquestionably he will. You will not find such a man entering into the danger that he wishes to shun. But why should he act thus prudently; why thus tacitly acknowledge the truth of the doctrine he opposes? Could he not vanquish all adverse circumstances by an effort of his will? Such objections are absurd. We know that a man of bad dispositions, and abandoned pursuits, may pretend to avail himself, in excuse for his conduct, and even plead in its justification the principles of necessity; but so he could, and frequently does, of other principles equally true. I have heard a dissipated and wicked character quoting scripture in justification of his conduct, "Let us eat, drink, and be merry, for to-morrow we die." But the truth is not to be shaken by the conduct of such men, or the objections arising therefrom. Indeed, so far from indolence and vice being encouraged by the doctrine of necessity, precisely the reverse is the truth. A necessarian has constantly before him a principle which is completely destructive of these things. He knows that in all his undertakings the means must be adequate to the attainment of the end, or the end cannot be accomplished. So that if a necessarian desire to increase the productive power of his land he bestows upon it a higher degree of cultivation, and takes every means to bring about the end desired. His system declares that the laws which govern thought, are as fixed and invariable as those which regulate matter. Hence the doctrine of necessity, rightly understood, will be found to produce effects directly the reverse of those specified in the objection—it will annihilate indolence and vice, and encourage practical virtue: because you will not find a necessarian, properly imbued with his

principles, anticipating results where no proper means have been employed to produce them; his principles will effectually subdue that visionary state of feeling which leads men to hope against experience, and to betray a neglect of consequences in the general conduct of life. A necessarian knows, that to be happy he must subject himself to the influence and control of those principles which will render him so. "Make the tree good, and the fruit will be good also." "Doth a fountain send forth at the same place sweet water and bitter?"

But it is useless to dwell upon objections. They serve but to dim the eye of an inquirer and becloud the truth he is in pursuit of;—their weakness may be compared to the blaze occasioned by a handful of straw, which, for a moment, obscures the beauty and splendour of a star in the firmament. The temporary blaze of the one is evanescent—it is soon extinguished; while the reality and brilliancy of the other is durable, and sheds its lustre when that which caused its transient obscurity is forgotten. Such, I anticipate, will be the fate of all objections to the doctrine of philosophical necessity.

But, in conclusion, permit me to draw attention to its direct influence upon the mind of a person who is firmly convinced of its truth, and who fully comprehends its principles. The necessarian believes that the human will is the subject of invariable laws, and that every evil, whether moral or physical, is only a means to an end, necessary for the production of great and universal happiness. Actuated by such exalted views, how can any man say that the doctrine tends to paralyze exertion? Though a necessarian believes that the best means are in operation to bring about the greatest possible happiness, he knows also that human agents are mainly instrumental in its accomplishment. This consideration exhilirates his feelings and excites to active usefulness. He feels compassion for all who are suffering under evils, and would cheerfully assist in removing them. Should similar evils overtake himself, his principles impart that degree of moral courage which enables him to sustain them with resignation and fortitude. Well understood it is a glorious doctrine. It strengthens our perceptions—invigorates our efforts to improve the condition of the unhappy—excites in our minds the strongest desire to be intelligent, active, and virtuous; and, above all, it convinces us that every future event, though it cannot be contingent, may, if we do our duty, be productive of greater happiness to mankind than the events of either the past or the present time. The true philosophic necessarian is happy in the contemplation of these things—from seeming evil he educes good — to him everything in nature teems with instruction; and of him it may with strict propriety be asserted, in the comprehensive and expressive language of Shakspeare, that he

Finds tongues in trees, books in the running brooks,
Sermons in stones, and good in everything.

ETERNITY OF THE UNIVERSE—PROVIDENCE OF GOD.

OPINIONS OF ARISTOTLE AND SPINOZA.

From the Marquis D'Argen's Dissertation on the Uncertainty of Human Knowledge.

All the ancient Philosophers were persuaded, that out of nothing, nothing could be made. Even those who maintained, that the world had a beginning, thought that the *Matter* of which it was made, was eternal, and had always had an existence. This is that *matter*, which Ovid calls the Chaos, and Epicurus calls Atoms, which having no mutual connection, floated about in empty space.

It seems, that this opinion of the ancient philosophers, who had *only* the light of nature for their guide, was founded upon reasons which they thought evident. If, said they, *something* may be made from *nothing*, and if *nothing* can produce *bodies*, we should every day see new productions, of which we could have no knowledge. Every thing might indifferently spring from every thing, and proceed without order or method, from any place or any cause; and if bodies and substances were created from nothing, all seeds so unchangeably specified and determined would be of no service. All sorts of animals and plants would be produced haphazard from all sorts of seeds. We should perpetually be seeing new creatures proceed from nothing, and they would produce others as chance should direct. Whereas we see, on the contrary, a perfect order and harmony in the works of Nature; all things have their rise from certain sources, from whence they always proceed. They require certain seed, matter, places and dispositions to each class. Corn, herbs, fruits, grow by little and little; and so far is nothing from producing trees and making them spring out of the earth in an instant, that men are obliged to cultivate it, and assist in its productions.

It was impossible, therefore, that the ancient philosophers, *being without the assistance of revelation*, should believe matter was created. For though some among them admitted a First Intelligent Principle, all that they could do by the help of the light of nature, was to consider it as co-eternal with matter. If the first cause, said they, or the first universal being, created matter, he must have taken it either from within himself, or from without himself; if he took it from within him, he is not infinite, seeing this matter which was in him must make at least a point; and the space which a point occupies may be measured. He also could not take it from without himself, for he would not be infinite if there was any thing besides himself. If any answer, that he neither took it from within himself, nor from without himself, but created it by the mere power of his will, they will not be much the nearer. For to say that God made matter by his power, is to say that he made it himself; the attributes of God are not distinct from God; the power of God is God himself. If it were not so there would be many infinities. His justice and mercy are as infinite as his power. If these qualities were separate in the deity, there would be as many infinities as there are attributes, which cannot be; there can be but one infinite, for the idea of infinity excludes every idea of augmentation. Thus, the saying that matter is formed by the *power* of God, does not solve the difficulty. The power of the deity is the deity himself. The question to know, whether he took matter from within or from without himself still remains.

There is yet a new difficulty more considerable than the former. A being supremely perfect, such as God is, could not create a being full of a thousand imperfections. It is contrary to the essence of a perfect being, that there should proceed from him another full of faults, and that these *faults* should greatly surpass his virtues. There is nothing so imperfect as matter; we readily perceive the imperfections thereof, therefore it could not be created by God. It could not create itself, therefore it must have existed from all eternity. The Chinese letters are full of this argument against the Missionaries, and it appears, that the reasons which they make use of against them, do not seem to them very conclusive. Nothing is equal, says an ingenious missionary, to the obstinacy of the Chinese Atheists, when we object to them, that the beautiful order, which reigns throughout the universe, could not be the effect of chance; that all things were created by a first Cause, which is God, they immediately reply, God is the author of moral and physical evil. It is in vain to say, that God, being infinitely good, cannot be the author of evil; for then they add, that God is not the author of all things that exist. When we represent to them, that evil and sin are the consequences of the bad use of free will in the creature, they answer very coolly, that this itself proves that God did not create all things; for since there are other beings besides himself, who have the power of creation, since there are other beings which do not owe their origin to him, he is not the only cause of every thing that exists in the world. It is to no purpose to reply, for you must own that if God is the author of every thing that exists, he is the cause of moral and physical evil. I did all I could to make him comprehend that evil and sin proceeded from non-entity, and from nothing; for this purpose I made use of the reasonings and demonstrations which M. Descartes published in his meditations, but he made a jest of the authority of this great man, and answered me with disdain, that nothing could not be the cause of something, and if God was the author of all the good which exists in the world, and that the evil which overwhelms the universe, proceeds from a non-entity, the power which nothing has to create beings, would be extended as far as the power of God, which is absolutely absurd and ridiculous; in short, he maintained, that moral and physical evil, are as positive beings as moral and physical good; and when I objected that evil is a privation which depends upon non-entity, as sickness is the privation of health, he replied that we might as well affirm that health is the privation of sickness, in a word, that a man who takes another's riches from a motive of covetousness, performs as real and as positive an act, as one, who gives alms to a poor man, from a motive of charity.

All the ancient philosophers were so far from believing that God created matter, that they thought him to be material. The Epicureans and Stoics were agreed on this point; and Tully examining the different opinions of all the philosophers concerning the deity, does not so much as take notice of Plato's sentiment, who was the only one who was really acquainted with the spirituality of God. Not but Tully had a very great esteem for Plato; but he looked upon his notion of the deity as wholly unintelligible.* And yet though Plato confessed that God was not material, yet he had nevertheless a very erroneous idea of him in many respects. And we may consider these odd, false and different notions which

* Quod Plato sine corpore Deum esse censet, id quale.

the greatest of the Pagan philosophers had of the deity, as so many demonstrative arguments against innate ideas.

Thus all the ancient philosophers were unanimously agreed that the first matter had been from all eternity, and the only dispute that arose amongst them was about the time when the regular disposition and *order*, which we now see in the universe, began. Some believed that the regularity and beauteous order, which we so much admire in the world, were produced and formed by a first intelligent cause, which they made co-eternal with matter. Others thought, that chance and the fortuitous concourse of atoms threw things at first into the disposition that we see them in. And, in fine, many philosophers have maintained that the world, such as we now behold it, was such from all eternity; and that the ranging and order of things therein are of the same standing as matter itself. Plutarch tells us that Parmenides, Melissus, the Chaldeans, and Pythygoras were of that opinion.

Of all the learned men who have asserted the eternity of the world, Aristotle has maintained that tenet with the greatest resolution. Although he often changed his opinion on other subjects, he never varied in *that*, but always defended it with vigour; he laughed at them who were of a contrary opinion; and said, speaking of them, that they gave him surprising apprehensions of terror; that for a long time he had been in no fear but that of the fall of his house, which was grown old and ruinated; but that he had now frightful notions in his head, since they would persuade him that the world, which had a beginning must certainly have an end, and that consequently it would fall like an old house and moulder into dust. This philosopher's principal reasons for his opinions were these, Motion, said he, must be eternal. Thus heaven and the world, which is in motion, must be eternal, I prove it thus: If there was a First Mover, as all motion supposes a mover, that mover must either be created, or be eternal, but yet at rest, by reason of some *obstacle*. Now suppose it which way you will, the consequence will be absurd; *for if this first mover be created, it is so by motion, which by consequence will be prior to the first: and if it was eternally at rest, the obstacle could not be removed without motion, which again will be prior to the first.*

Among other arguments of Aristotle, the following is one not wholly free from embarrassment. If the world was created it may be destroyed, for whatever had a beginning ought to have an end. The world is incorruptible and unalterable, therefore it is eternal and uncreated. He brings the following argument to prove the world is incorruptible. If the world can be destroyed, it must be naturally by him who created it; but it cannot be destroyed by him, therefore the world is eternal. If we suppose that God has the power to destroy the world, then it is necessary to inquire whether the world is perfect or not. If it is not, it was not created by God; because a perfect Cause can produce nothing imperfect, otherwise God must be supposed to be an imperfect being; which is absurd. If, on the other hand, the world is perfect, God cannot destroy it, because every thing that is bad, is contrary to his essence, for it is the nature of an evil being not to hurt things that are good.

The opinion of this philosopher was so much the more probable, as that there are much fewer difficulties to be resolved in the system of the eternity of the world, than in those which oppose it. For since all philosophers of every sect, admitted the exisence of *matter* from all eternity, it was much more natural to believe that *order* was co-eternal with it, than to believe this *first matter* useless and inactive, as well as the first intellectual principle which existed with it, if *any such* being existed; or if they contented themselves only, as Epicurus did, with the mere matter of *atoms*, which was before the formation of the world; what a difficulty followed upon this; to believe that chance, and the concourse of atoms, could produce that harmony and beautiful order which we see in the world.

Besides, the followers and disciples of Aristotle, proposed a question which was unanswerable, (without being enlightened by revelation,) they demanded, for example, in the formation of things from atoms, which was made first, the egg or the bird? for there can be no egg without a bird, nor no bird without an egg. Thus they maintained, that there must have been a sort of circle in the seeds, and that eggs and birds had always been produced alternately—the one after the other—without their particular species ever having either origin or beginning.

The eternity of the world being once supposed, all difficulties vanish, and everything is produced *naturally* and *necessarily*. We are then no longer astonished at the *order* of the universe, the regularity of the seasons, and the productions of nature. These are consequences of the eternity of the world—that which has been from all eternity, must absolutely have been so. Thus if order has subsisted eternally *a parte ante*, it must continue eternally to exist *a parte post*. It is a great difficulty, at the first view to admit of an eternal matter; but the difficulties on the other side of the question are still greater.

If it is no easy thing to conceive the eternity of matter, we shall find it as difficult to form the idea of an eternal and spiritual being. There are two obstacles in our way in the first, viz.: spirituality, of which I have but a very indeterminate notion, and the eternity of the same being. If I proceed further, I get into a labyrinth, from whence I can find no way out. It is impossible for me to comprehend how a spiritual being can produce matter; if I go still furthur, I am only the more confused. If God created man, and he proceeded from a principle of sovereign goodness, how came he to be bad? Can supreme goodness produce a wicked creature? Can the most holy being produce a sinful one?

Spinoza thought it was impossible that a creature so miserable as man, could be the work of a being of all possible goodness. "*If man*," said this philosopher, "*proceeded from a principle of infinite goodness, can he be bad? How can infinite goodness produce an unhappy creature? Can perfect holiness produce a sinful creature?*" Some, perhaps, may answer, that God made man happy, but that, becoming wicked, he deserved to be punished, and that this punishment proceeds from a principle of sovereign goodness, of which justice is an attribute, and as much of his *essence* as his goodness. But this argument does not appear convincing. For if man proceeded from a principle of goodness, he must have been created—not only without any actual evil—but even without any inclination to evil. If it be objected that he had simply the *power to determine himself* to evil, and that complying therewith, *he* only is guilty of the sin and moral evil that is introduced into the world, this will mend the matter but very little. For God forsaw that man would sin, and make an ill use of *this free will*, seeing that we cannot deny but that every thing is known to and present with God. Now if God foresaw the fall of man, he ought to have prevented it, because a principle of absolute goodness is not capable of making his creatures unhappy; for that is contrary to the nature of infinite goodness; and though it were possible that God did not forsee the fall of man, he might at least think such a thing might happen, and for that reason, he ought to have prevented such a consequence; for the goodness of a being altogether perfect would not be infinite, if we could imagine any goodness greater than his. *It is not therefore becoming of this infinitely perfect being to bestow upon men a* FREE WILL, *which he is certain they will make a fatal use of. It belongs only to a mischievous and wicked being*, to give such things to *creatures as will surely be destructive to them.*

"The Chinese atheists," says a *missionary*, "are not more tractable with relation to providence, than with regard to the creation. When we teach them that God, who created the universe out of nothing, governs it by general *laws*, worthy of his infinite wisdom, and to which all creatures conform with a wonderful regularity, they say that these are high sounding words to which they can affix no idea, and which do not at all enlighten their understanding.

"As for what we call *laws*, answer they, we understand an *order established by a legislature*, who has the power to enjoin them, to creatures capable of executing his laws, and consequently, capable of *knowing* and *understanding* them. Then, can it be said, without a manifest absurdity, that a fœtus, that a plant, that beasts, have a perfect knowledge of these laws, and that they conform regularly thereto, by virtue of this knowledge? But if they are ignorant of them, how can they put them in execution? Does not good sense dictate to us, that in order to conform ourselves to a law, we must *know it* and *comprehend it*, and the knowledge and perception of a law cannot be had, but by the means of reason and understanding?" "God," they add, "has established general laws; so far it is very good, but for whom are they made? Is it for beings capable of knowing and understanding them? or for beings incapable of understanding and knowleage? If you say, that God has established these laws to be executed by beings capable of knowing them, it follows that animals, plants, and in general, all bodies which act conformable to these general laws, have a *knowledge* of them, and consequently that they are endued with understanding—which is absurd." If you say that God has established these laws in order to be put in execution, by beings *incapable of knowing them*, and destitute of understanding, they will hiss at you and ask, "how a being can execute a plan of which he has no idea, and of which you own he can have no knowledge, because he is void of reason and understanding?" In a word, they insist, whatever side you take, if you suppose that there are general laws, which govern and regulate all parts of the world, you must necessarily own, that plants, animals, and all other bodies, have a perfect knowledge of these laws, or else that they put them in execution without knowing them; both of which assertions are equally absurd; for we can have no idea, by which we can comprehend how a being destitute of understanding, can have any knowledge of laws established by an intelligent being, or how any creature can execute the same laws without knowing them.

Henry Hetherington, London.

LITERARY LEGERDEMAIN:

OR,

THE ARGUMENT, A PRIORI, FOR THE BEING AND ATTRIBUTES OF GOD,

BY WILLIAM GILLESPIE,

ATHEISED,

BY CHARLES SOUTHWELL.

BY THE SUBSTITUTION OF A SCORE OR TWO PROPER WORDS FOR AS MANY IMPROPER ONES.

[*The substituted words are printed in Italics.*]

DIVISION I.

PART I.

PROPOSITION I. Infinity of *Matter* is necessarily existing.

1. Even when the mind endeavours to remove from it the idea of infinity of *matter*, it cannot, after all its efforts, avoid leaving still there, the idea of such infinity. Let there be ever so much endeavour to displace this idea, that is, conceive infinity of *matter* non-existent; every one, by a reflex examination of his own thoughts, will find, it is utterly beyond his power to do so.

2. Now, since even when we would remove the notion of infinity of *matter* out of our minds, we cannot but leave the notion of it behind; from this, it is manifest, infinity of *matter* is necessarily existing: For, every thing the existence of which we cannot but believe, is necessarily existing.

3. To deny, therefore, that infinity of *matter* necessarily exists, is to utter a downright contradiction.

4. Infinity of *matter* is, then, necessarily existing.

PROPOSITION II. Infinity of *Matter* is necessarily indivisible.

PROLEGOMENA.

1. To say, infinity of *matter* is necessarily indivisible, is as much as to say, the parts of infinity of *matter* are necessarily indivisible from each other.

2. Indivisible, in this proposition means indivisible, either really or mentally: For there can be no objection to a real, which would not apply to a mental divisibility, and a mental divisibility we must suppose, would imply an actual divisibility, of infinity of *matter*.

3. The proposition, then, is to the effect, that the parts of infinity of *matter* are necessarily indivisible from each other really or mentally.

DEMONSTRATION.

1. That which is divisible really, may be divided really: and a thing which is actually divided from another must have superficies of its own, every way, and be removed or separated from that other thing, be it by ever so little a distance. If any one should say that things really divided from each other have not real superficies of their own, every way; to be able to belive him, we must first be able to believe this, that a thing can be, and not be, at the same time, and in the same place: And if any one should say that things which are really divided from each other, which have real superficies of their own every way, can possibly be conceived as without a certain distance, however little, being between them; as this, it could as soon be believed that in a good syllogism of the first figure, the conclusion does not necessarily follow from the premises. Being really divided, and being really separated, mean, thus, the same thing.

2. Now, divisibility meaning possibility of separation: As it is an utter contradiction to say, infinity of *matter* can be separated; that is, a part of infinity of *matter* separated, by a certain distance, from infinity of *matter*; there remaining infinity of *matter* after part of it is taken away: the part of infinity of *matter* so removed, being removed from the remaining parts to these very same parts; the part, thus, being at rest while it is taken away: the part so moved away, being moved away from itself; it still remaining, inasmuch as there is necessarily infinity of *matter*; that is, though moved away, being not moved away: Which could not be, unless it be false, that whatever is, is, where it is, and when it is. As it is, thus, an utter contradiction to say infinity of *matter* can be separated, so it is an utter contradicton to say it is not indivisible.

3. Infinity of *matter* is, then, necessarily indivisible.

SCHOLIUM.

The parts of infinity of *matter* being necessarily indivisible from each other; it is a necessary consequence, that the thing, the

parts of which are divisible from each other, is not infinity of *matter*; nor any part of it: part, in the sense of partial consideration only, for otherwise infinity of *matter* can have no parts.

COROLLARY from Proposition II. Infinity of *Matter* is necessarily *moveable*.

PROLEGOMENA.

1. Infinity of *matter* is necessarily *moveable:* This is equal to saying, the parts of infinity of *matter* are necessarily moveable among themselves.

2. And *moveable*, in the corollary, means *moveable* either really or mentally.

3. The corollary, therefore, lays down, in effect, that the parts of infinity of *matter* are necessarily *moveable* among themselves really or mentally.

DEMONSTRATION.

1. Motion of parts supposes, of necessity, *motion* of the parts. He who does not see that *motion* of parts supposes, of necessity, *motion* of the parts, need never be expected to see that because every A is equal to B, therefore some B is equal to A. And, infinity of *matter* being necessarily *capable* of *motion*, is, therefore, necessarily *moveable*, that is, its parts are necessarily *moveable* among themselves.

2. Infinity of *matter* is then, necessarily *moveable*.

SCHOLIUM.

The parts of infinity of *matter* being necessarily *moveable* among themselves; it is a necessary consequence, that the thing, the parts of which are *immoveable* among themselves, is not infinity of *matter*; nor any part of it: part in the sense of partial consideration only, for otherwise infinity of *matter* can have no parts.

PROPOSITION III. There is necessarily a Being of Infinity of *Matter*.

1. Either, infinity of *matter* subsists, or (which is at bottom the same thing) we conceive it to subsist, without a support or substratum: or, it subsists not, or (which is the same thing) we conceive it not to subsist, without a support or substratum.

2. First, if infinity of *matter* subsist without a substratum, then it is a substance. And if any one should deny, that it is a substance, it so subsisting, to prove, beyond contradiction, the utter absurdity of such denial, we have but to defy him to show, why infinity of *matter* is not a substance, so far forth as it can subsist by itself, or without a substratum.

3. As, therefore, it is a contradiction to deny that infinity of *matter* exists, so there is, on the supposition of its being able to subsist, without a substratum, a substance or being of infinity of *matter*, necessarily existing: Though infinity of *matter*, and the being of infinity of *matter* are not different, as standing to each other in the relation of mode and subject of the mode, but are identical.

4. Secondly, if infinity of *matter* subsist not without a substratum, then, it being a contradiction to deny there is infinity of *matter*, it is a contradiction to deny there is a substratum to it.

5. Whether or not men will consent to call this substratum substance or being, is of very little consequence. For, 'tis certain that the word substance or being, has never been employed, can never be employed, to stand for anything better entitled to the application of the term than the substratum of infinity of *matter*. But to refuse to give such substratum that name, being a thing obviously most unreasonable, let us call the substratum of infinity of *matter* by the name substance or being.

6. There, is, then, necessarily, a being of infinity of *matter*.

PROPOSITION IV. The Being of Infinity of *Matter* is necessarily of unity and simplicity.

1. Because infinity of *matter* is necessarily indivisible, therefore it is of the truest unity, for to affirm that though it is necessarily indivisible, even so much as by thought, yet it is not of the truest unity, is to affirm what is no more intelligible, than would be the assertion, that a circle, this being a figure contained by one line, with every part of that line or circumference equally distant from a certain point, is not round.

2. And as infinity of *matter* is necessarily of the truest unity, so it is necessarily of the utmost simplicity. For what more can be included in simplicity than is implied in unity caused by a thing being necessarily indivisible, we can have no conception.

3. And as, on the supposition that infinity of *matter* subsists by itself, there is necessarily a being of infinity of *matter*, so, this supposed, that being is necessarily of unity and simplicity.

4. If infinity of *matter* subsist not without a substratum; that we cannot, without an express contradiction, deny, that the substratum is of the truest unity, and utmost simplicity, may be most easily demonstrated.

5. For it is intuitively evident, that the substratum of infinity of *matter* can be no more divisible than infinity of *matter* itself. And if any one should affirm that though infinity of *matter* is necessarily indivisible, yet that its substratum can be considered as divisible, we could no more assent to the proposition than we could believe that a subject can never be truly predicated of itself. And, therefore, as infinity of *matter*

is necessarily indivisible, so is its substratum.

6. And infinity of *matter* being necessarily of unity and simplicity because necessarily indivisible, its substratum is so likewise for the same reason.

7. And as, on the supposition that infinity of *matter* subsists not without a substratum, there is necessarily a being of infinity of *matter*, so, this supposed, that being is necessarily of unity and simplicity.

8. The being of infinity of *matter* is necessarily, then, of unity and simplicity.

COROLLARY.

The substratum of infinity of *matter* being necessarily *moveable*, that is, its parts being necessarily *moveable* from each other: It is a corollary, that its parts, (parts, in the sense of partial consideration only,) are necessarily *moveable* among themselves: For the same reason that the parts of infinity of *matter* are necessarily *moveable* among themselves, *though* necessarily indivisible from each other.

SCHOLIUM.

On the whole, therefore, the thing, the parts of which, are divisible from each other, is not the substratum of infinity of *matter*, nor any part of it: And, the thing, the parts of which are *immoveable* among themselves, is not the substratum, nor any part of it: Part, in the sense of partial consideration only.

SUB-PROPOSITION. The Material Universe is *infinite* in extension.

1. If, then, it should be maintained, that the material universe is the substratum of infinity of *somethingelse*; (which will be maintained, as is most evident, if it be contended that the material universe is a thorough plenum of infinity of *somethingelse*;) to put to the proof, whether or not the material universe can be such substratum, we have but to ask, are the parts of the material universe *indivisible* from each other? And, are they moveable among themselves? For, if they be so *indivisible*, if so moveable, then the material universe cannot be the substratum of infinity of *somethingelse*.

2. Now, we know, of a certainty, that *all* parts of the material universe are *indivisible* from each other; and, as far as we know, every part of it to which our minds could be directed is as *indivisible* as are the parts which we certainly know are *indivisible*: and this is the conclusion to which, by the rules of philosophy, we are entitled to come.

3. Therefore, the material universe cannot be the substratum of infinity of *somethingelse*.

4. Again, we are certain that some parts of the material universe are moveable among themselves; and, that every part of it to which our minds could be directed is as moveable, as are the parts which we certainly know are moveable, is (here, as in the other case) what we are entitled to conclude.

5. Therefore, again, the material universe cannot be the substratum of infinity of *somethingelse*.

6. And, if, because the parts of the material universe are *indivisible* from each other, it is proved that it is not the substratum of infinity of *somethingelse*; then, because the parts of the material universe are *indivisible* from each other, *though* moveable among themselves, it is proved, much more, (if that were possible,) that the material universe is not the substratum of infinity of *somethingelse*. It is proved that the material universe is not the substratum of infinity of *somethingelse*; nor any part thereof, for the substratum of infinity of *somethingelse* can have no parts but in the sense of partial consideration: that is, that the material universe is *infinite* in extension. For were it of infinity of *somethingelse*, it would be the substratum thereof. But it being not that substratum: Therefore, it is not of infinity of *somethingelse*.

7. The material universe, then, is *infinite* in extension.

GENERAL SCHOLIUM.

1. The parts of infinity of *matter*, or of its substratum, if it have a substratum, being necessarily indivisible from each other, *though moveable* among themselves: and the parts of the material universe being *indivisible* from each other, *though* moveable among themselves: and it therefore following, that the material universe is not the substratum of infinity of *somethingelse* but is infinite in extension: Here are two sorts of *somethingelse*. The one sort, that which the material universe has: And the other, the extension of infinity of *somethingelse*. And as infinity of *matter* is necessarily existing, and as the extension of the material universe must exist, if it exist, in the extension of infinity of *matter*; a part of this, or of its substratum, if it have a substratum, (part, but in the sense of partial consideration;) must penetrate the material universe, and every atom, even the minutest atom, of it.

2. It will be proper, therefore, to distinguish beteen these two kinds of *somethingelse*. And, accordingly, let us confine to matter, namely, to the distance of the extremities of matter from each other, the name *somethingelse*; and apply to the *somethingelse* of infinity of *somethingelse* a part of which (part in the sense of partial con-

sideration only,) penetrates all matter to the minutest atom, the name Expansion.

3. And, therefore, every thing which hath been proved to be true in relation to that *somethingelse* which matter has not, must be true with regard to Expansion.

PROPOSITION V. There is necessarily but one Being of infinity of *Matter*.

1. Infinity of *matter* either subsists by itself, or it subsists not without a substratum. In both cases there is necessarily a being of infinity of *matter*. Now, we are under a necessity of inferring from the existence of such a being, that there is but one such being.

2. For, as 'tis evident, there can be but one infinity of *matter*, so, on the supposition that it subsists by itself, and so is a being, there can be but one being of infinity of *matter*. And, as 'tis evident, there can no more be more than one substratum of infinity of *matter* (whatever that substratum is) than there can be more than one infinity of *matter*; and as, therefore, 'tis evident, there can be but one substratum of infinity of *matter*: so, on the supposition that infinity of *matter* subsists not without a substratum, or being, there can be but one being of infinity of *matter*.

3. And, therefore, any one who asserts he can suppose two or more necessarily existing beings, each of infinity of *matter*, is no more to be argued with than one who denies, whatever is, is. The denying of this proposition cannot, indeed, be regarded as more curious than the affirming of the other.

4. There is, then, necessarily, but one being of infinity of *matter*.

PART II.

PROPOSITION I. Infinity of Duration is necessarily *infinite*.

1. The truth of this is evident from the same sort of consideration, as shows there is necessarily infinity of *matter*; to wit, that even when we endeavour to remove from our minds the idea of infinity of duration, we cannot, after all our efforts, avoid leaving this idea still there. Endeavour as much as we may to displace the idea, that is, conceive infinity of duration non-infinite, we shall find, after a review of our thoughts, that to do so is utterly beyond our power.

2. And since, even when we would remove the conception of infinity of duration from the mind, we necessarily leave the conception behind; 'tis manifest, that infinity of duration is necessarily *infinite*: Because, every thing the *infiniteness* of which we cannot but believe, is necessarily infinite.

3. Infinity of duration is, then, necessarily *infinite*.

PROPOSITION II. Infinity of Duration is, necessarily, indivisible.

PROLEGOMENON.

This proposition is equivalent to another: to-wit, the parts of infinity of duration are necessarily indivisible from each other; and indivisible really or mentally.

DEMONSTRATION.

1. As was laid down before, what is divisible may be divided; and that which is divided from something else must have superficies, every way, and be separated from the other thing, be the distance ever so small:—There is no difference between being divided and being separated.

2. Then, divisibility meaning possibility of separation: because the parts of infinity of duration are necessarily inseparable, they are necessarily indivisible.

3. Infinity of duration is then necessarily indivisible.

COROLLARY from Proposition II. Infinity of Duration is, necessarily, immoveable.

PROLEGOMENON.

The Corollary is tantamount to this proposition, the parts of infinity of duration are necessarily immoveable among themselves, really or mentally.

DEMONSTRATION.

1. Motion of the parts of infinity of duration, would necessarily involve separation of its parts. And its parts being necessarily incapable of separation, are, therefore, necessarily inmoveable among themselves.

2. Infinity of duration is, then, necessarily immoveable.

PROPOSITION III. There is, necessarily, a Being of Infinity of *Matter*.

1. Either infinity of *matter* exists, or is conceived to exist, without a substratum; or, it exists not, or is conceived not to exist, without a substratum.

2. First, if infinity of *matter* exists by itself, it is a substance. For should any one deny that it is a substance, if it so exist; we shall prove, past contradiction, the absurdity of the denial by just demanding the reason why infinity of *matter* is not a substance, if it exists without a substratum, or, by itself.

3. And therefore, as there is necessarily infinity of *matter*, there is, supposing it to exist by itself, a substance or being of infinity of *matter* necessarily existing: Infinity of *matter* and the being of infinity of *matter* being identical, not different.

4. Secondly, if infinity of *matter* exist not without a substratum, there is a substance or being of infinity of *matter*. For the word substance or being can never, it is certain, stand for anything having a better claim to the application of the term than such substratum.

5. And as infinity of *matter* is necessarily existing, so there is necessarily a substance or being of infinity of *matter*, on the supposition that it exists not without a substratum.

6. There is necessarily, then, a being of infinity of *matter*.

PROPOSITION IV. The Being of Infinity of *Matter* is, necessarily, of unity and simplicity.

1. As infinity of *matter* is necessarily indivisible, so it is necessarily of the truest unity. For, if what is necessarily indivisible, even by thought, be not of the truest unity, what unity consists in is altogether unintelligible.

2. And since infinity of *matter* is necessarily of the truest unity, it is, also of the utmost simplicity. Because we can have no conception of what is in simplicity that is not in unity caused by a thing being necessarily indivisible.

3. And as there necessarily is a being of infinity of *matter* on the supposition that infinity of *matter* exists without a substratum, so, this supposed, the being is necessarily of unity and simplicity.

4. If infinity of *matter* exists not without a substratum; that the substratum is of the truest unity and utmost simplicity, is a thing not difficult to be demonstrated.

5. For, that the substratum of infinity of *matter* is no more divisible than infinity of *matter*, is a self-evident truth. Therefore, because infinity of *matter* is necessarily indivisible, so is the substratum

6. And infinity of *matter*, because necessarily indivisible, being necessarily of unity and simplicity, its substratum, for the same reason, is so likewise.

7. And as there necessarily is a being of infinity of *matter*, on the supposition that infinity of *matter* exists not without a substratum, so, this supposed, the being is necessarily of unity and simplicity.

8. The being of infinity of *matter* is, then, necessarily of unity and simplicity.

SCHOLIUM I.

The substratum of infinity of *matter* being necessarily indivisible, that is, its parts being necessarily indivisible from each other; it is a necessary consequence that the thing, the parts of which are divisible from each other, is not such substratum, nor any part thereof.

COROLLARY

It is a corollary from the proposition, the parts of the substratum of infinity of *matter* are necessarily indivisible from each other, that they are necessarily *moveable* among themselves: Just as infinity of *matter* is necessarily indivisible, because necessarily indivisible.

SCHOLIUM II.

And the parts of the substratum of infinity of *matter* being necessarily *moveable* among themselves; it is a necessary consequence, that the thing, the parts of which are *immoveable* among themselves, is not such substratum, nor any part thereof.

SUB-PROPOSITION. The Material Universe is *infinite* in duration.

1. If, then, it should be held, that the Material Universe is the substratum of infinity of *somethingelse*, or a part thereof; (which will be held, if it be alleged that the material universe is of itself of infinity of *somethingelse*: just as it will be maintained, that the material universe is the substratum of infinity of *somethingelse*, if it be contended that the material universe is a plenum of infinity of *somethingelse*.) Should it be held, that the material universe is the substratum of infinity of *somethingelse*, or a part thereof; to put to the proof whether or not the material universe can be such substratum, or a part thereof, we have but to ask, are the parts of the material universe *indivisible* from each other? and, are they moveable among themselves? for if they be so *indivisible* and moveable, the material universe cannot be the substratum of infinity of *somethingelse*, nor any part thereof, the substratum having no parts in the sense of capability of separation.

2. Now, we know, certainly, that *no* parts of the material universe, are *indivisible* from each other; and that every part of it to which our mind could be directed is as *indivisible*, as are the parts which we certainly know are *indivisible*, is the conclusion to which the rules of philosophy entitle us to come.

3 Then, the material universe cannot be the substratum of infinity of *somethingelse*, nor any part thereof.

4. Again, we know, certainly, that some parts of the material universe are moveable amongst themselves; and that every part of it to which our mind could be directed is as moveable as are the parts which we certainly know are moveable, is (in this, as well as in the other case) the conclusion to which we are entitled to come.

5. Then, again, the material universe cannot be the substratum of infinity of *somethingelse*, nor any part thereof.

6. That is, the material universe is *infinite* in duration. For, were it of infinity of *somethingelse*, it would be the substratum thereof, or at least, a part of the substratum. But it being not that substratum, nor any part of it; therefore it is not of infinity of *somethingelse*.

7. The material universe is then, *infinite* in duration.

COROLLARY from Sub-proposition. Every succession of substances is finite in duration.

1. Should it, now, be asserted that any succession, or successions, of substances finite in *extent;* finite in *extent,* for a succession of substances of infinity of *extent* were we know not what: Should it be asserted, that any successions, or any one succession, of substances—say of minerals, or vegetables, or animals, or all together, or of worlds, or of systems of worlds—is of infinity of duration, the falsity of the assertion is, immediately and abundantly, apparent. For seeing that the whole material universe, itself, is *infinite* in duration, every succession of substances which are in the material universe (and know you of substances finite in *extent* which are out of it?) must, therefore, be finite in duration too.

2. Every succession of substances is, then, finite in duration.

PROPOSITION V. There is, necessarily, but one Being of Infinity of *Matter.*

1. Infinity of *matter* either exists without a substratum, or it exists not without a substratum: And in either case, there necessarily is a being of infinity of *matter.* And we are under the necessity of inferring from the existence of such a being, that there can be no more than one such being.

2. Because 'tis manifest there can be but one infinity of *matter,* therefore, on the supposition that it exists without a substratum, and, so, is a being, there can be but one being of infinity of *matter.* And because 'tis as manifest there can be but one substratum of infinity of *matter* (whatever the substratum is), as that there can be but one infinity of *matter;* and because, therefore, 'tis manifest there can be but one such substratum: therefore, on the supposition that infinity of *matter* exists not without a substratum, or being, there can be but one being of infinity of *matter.*

3. There is then, necessarily, but one being of infinity of *matter.*

PART III.

PROPOSITION I. There is, necessarily, a Being of Infinity of *Matter* and Infinity of Duration.

1. This will be demonstrated, if it be proved, that the necessarily existing being of infinity of *matter,* and the necessarily existing being of infinity of duration, are not different beings, but are identical.

2. Now, either, infinity of *matter* subsists by itself, and, then, it is a being: and infinity of duration exists by itself, and, then it is a being.

3. Or, infinity of *matter* subsists not without a substratum, or being: and, infinity of duration exists not without a substratum, or being.

4. To take the former alternative. Every part of infinity of *matter* being in every part of infinity of duration, every part of the being of infinity of *matter* is in every part of the being of infinity of duration. And every part of infinity of duration being in every part of infinity of *matter,* every part of the being of infinity of duration is in every part of the being of infinity of *matter.* Part, in all the cases, in the sense of partial consideration only.

5. To-wit, the whole of infinity of *matter* being in the whole of infinity of duration, the whole of the being of infinity of *matter* is in the whole of the being of infinity of duration. And, the whole of infinity of duration being in the whole of infinity of *matter,* the whole of the being of infinity of duration is in the whole of the being of infinity of *matter.* Whole, in every instance but as a figure.

6. And this being, most manifestly impossible, if the being of infinity of *matter,* and the being of infinity of duration be different; it necessarily follows that they are identical.

7. That is, infinity of *matter* is infinity of duration, and infinity of duration is infinity of *matter.* Which conclusion being plainly absurd; and it necessarily following from the supposition, that infinity of *matter* subsists by itself, and that infinity of duration subsists by itself, it is proved that the supposition itself is absurd. Therefore, infinity of *matter can* exist by itself, and infinity of duration cannot exist by itself.

8. Then, to turn to the other alternative, infinity of *matter* subsists not without a substratum, or being: and infinity of duration subsists not without a substratum, or being.

9. And, as every part of infinity of *matter* is in every part of infinity of duration, therefore, every part of the substratum of infinity of *matter* is in every part of the substratum of infinity of duration. And, as every part of infinity of duration is in every part of infinity of *matter,* therefore, every part of the substratum of infinity of duration is in every part of the substratum of infinity of *matter.* Part, but in the sense of partial consideration.

10. That is, the whole of infinity of *matter* being in the whole of infinity of duration the whole of the substratum of infinity of *matter* is in the whole of the substratum of infinity of duration. And, the whole of infinity of duration being in the whole of infinity of *matter,* the whole of the substratum of infinity of duration is in the whole of the substratum of infinity of *matter.* Whole, in all the cases, used figuratively.

11. And this being, most manifestly, impossible, if the substratum, or being, of infinity of *matter,* and the substratum, or being of infinity of duration, be different, it follows

necessarily, that they are identical: To-wit, the substratum, or being, of infinity of *matter* is, also, the substratum, or being, of infinity of duration.

12. And this being proved, it is demonstrated, there is, necessarily, a being of infinity of *matter*, and *none* of duration.

13. There is, then, necessarily, a being of infinity of *matter* and *none* of duration.

PROPOSITION II. The Being of Infinity of *Matter* and *none* of duration is, necessarily, of unity and simplicity.

1. The being of infinity of *matter* is necessarily, of unity and simplicity. And, the being of infinity of duration is, necessarily, of unity and simplicity. And these two being not different, but identical, it follows, that the being of infinity of *matter* and *none* of duration is, necessarily, of unity and simplicity.

2. The Being of infinity of *matter* and *none* of duration is, then, necessarily, of unity and simplicity.

PROPOSITION III. There is, necessarily, but one Being of Infinity of *Matter*, and *none* of duration.

1. There is, necessarily, but one being of infinity of *matter*. And the being of infinity of *matter* being also the being of infinity of duration, it follows, that there is, necessarily, but one being of infinity of *matter* and *none* of duration.

2. There is, necessarily, then, but one being of infinity of *matter* and *none* of duration.

DIVISION II.

PART I.

PROPOSITION. The simple, sole, Being of Infinity of *Matter*, *not* of duration, is, necessarily, intelligent, and all-knowing.

1. For *matter* either began to be, or it never began to be.

2. That it never began to be, is evident in this, that if it began to be, it must have had a cause; for whatever begins to be must have a cause. And the cause of *matter* must be of *matter*; for, what is not of *matter* cannot make *matter* begin to be. Now, *matter* being, before *matter* began to be, is a contradiction. And this absurdity following from the supposition, that *matter* began to be, it is proved, that *matter* never began to be: to-wit, is of infinity of duration.

3. And as *matter* is of infinity of duration, and supposes a being: and no succession of substances, or beings, is of infinity of duration: it necessarily follows, that there is one being of infinity of duration which is of *matter*. And as there is but one being of infinity of duration: and this being is of simplicity: and is also of infinity of *matter*: it follows, that the simple, sole, being of infinity of *matter* and of duration is necessarily of *matter*.

4. And that this being is all-*doing*, is no inference from the proposition, that the simple, sole, being of infinity of *matter* and of duration is necessarily of *matter*, for it is, indeed, implied by such proposition: a being of *matter* who is of infinity of *matter* and of duration, is convertible with an all-*filling* being.

5. The simple, sole, being of infinity of *matter* and of duration, is, then, necessarily *matter*, and all-*doing*.

SCHOLIUM.

The simple, sole, being of infinity of *matter* and of duration, being *matter*, is a *being*, a *being unconscious* of itself. An intelligent being who is not *conscious*, being all the the same as an intelligent being who is not, in any proper sense of the term, intelligent: and *intelligence* which is not conscious of itself, being just *intelligence* which is not deserving of the name of *intelligence* at all.

PART II.

PROPOSITION. The simple, sole, Being of Infinity of *Matter*, *not* of duration, who is All-*doing*, is necessarily All-powerful.

1. This must be granted, if it be shown, that the simple, sole, being of infinity of *matter*, *not* of duration, who is All-knowing, made *nothing* begin to be.

2. As the material universe is *infinite* in duration, or *eternal*, it *never* had a cause; for, whatever begins to be must have a cause. And this cause must be, in one respect or other, the simple, sole, being of infinity of *matter*, *not* of duration, who is All-knowing; inasmuch as, what being, or cause, independent of that being, could there be? And therefore, that being made *nothing* begin to be.

3. And this being shown, it must be granted, that that being is, necessarily, All-powerful.

4. The simple, sole, being of infinity of *matter* and duration, who is All-doing, is, then necessarily, All-powerful.

PART III.

PROPOSITION. The simple, sole, Being of Infinity of *Matter*, *not* of duration, who is all-*doing*, and all-powerful, is necessarily, entirely free.

1. This will be evinced, if it be manifested, that the simple, sole, being of infinity of *matter*, *not* of duration, who is all-*doing*, and all-powerful, made motion begin to be.

2. Of all the substances now in motion, none of them belongs to a succession of infinity of duration, every succession of substances being finite in duration. And the moving substances being finite in duration, or having begun sometime to be, they must

have had a cause; for whatever begins to be must have a cause. And no first cause can be assigned, or even thought of, other than the simple, sole, being of infinity of *matter*, *not* of duration, who is all-*doing*, and all-powerful. Therefore, this being made moving substances, or motion begin to be.

3. And this being manifested, it is evinced, that that being is, necessarily, entirely free,

4. The simple, sole, being of infinity of *matter* and of duration, who is all-*doing*, and all-powerful, is, then, necessarily, entirely free.

DIVISION III.

PROPOSITION. The simple, sole, Being of Infinity of *Matter*, *not* of duration, who is all-*doing*, all-powerful, and entirely free, is, necessarily, *negatively* happy.

1. Every position which we cannot but believe is a necessary truth. But we cannot but believe, that the simple, sole, being of infinity of *matter*, *not* of duration, who is all-*doing*, all-powerful, and entirely free, is *negatively* happy. Therefore, that this being is *negatively* happy, is a necessary truth.

2. Before we could righteously predicate unhappiness of the simple, sole, being of infinity of *matter*, and of duration, who is all-*doing*, all powerful and entirely free, we would require to know of some sufficient reason for the predication. But we can know of none. For every kind, and degree of unhappiness must proceed, or be resolvable into what proceeds, from some natural defect or imperfection: And what imperfection can that simple being be subject to, who, only, is, of infinity of *matter*, *not* of duration, who is all-*doing*, all-powerful, and entirely free.

3. And as we can have no sufficient reason for ascribing unhappiness to that being; so, on the other hand, there is a sufficient reason why we cannot help ascribing to it happiness the most complete. The being is a *being unconscious* of itself: that is, perceives *not* its own attributes, or perfections, and is *unconscious* of the thoughts whereby *we perceive* them. How could a being *unconscious* of perceiving, as appertaining to itself, such attributes as infinity of expansion and of duration, all-powerfulness, entire freeness, be supposed otherwise than as most *negatively* happy?

4. Truly, therefore, we cannot but believe, that the simple, sole, being of infinity of *matter*, *not* of duration, who is all-*doing*, all-powerful, and entirely free, is completely happy.

5. The simple, sole, being of infinity of *matter*, *not* of duration, who is all-*doing*, all-powerful, and entirely free, is then, necessarily, completely happy.

SUB-PROPOSITION. The simple, sole, Being of Infinity of *Matter*, *not* of duration, who is all-*doing*, all powerful, and entirely free, and completely happy, is, necessarily, perfectly good.

1. On the supposition, that the simple sole, being of infinity of *matter* and of duration, who is all-*doing*, all-powerful, and entirely free, and completely happy, created intellectual and moral beings—indeed, any animal natures whatever; the only motive, or, if you think there were more motives than one, one of the motives, to create, *may* be believed to have been, a desire to make happiness, besides its own consummate happiness, begin to be. Should there be assigned any additional motive, it cannot be believed to have been incompatible with such desire. The reason is very plain: A being labouring with incongruous motives cannot be happy.

2. But 'tis the case, that the simple, sole, being of infinity of *matter*, *not* of duration, who is all-*doing*, all powerful, entirely free, and completely happy, *caused* intellectual and moral, or, to employ a most comprehensive term, sentient, substances or beings.

3. Therefore, the only motive, or, at least, one of the motives, to *cause*, *may* have been, a desire to produce creaturely happiness.

4. The consequentially necessary connection between the consummate happiness of the simple, sole, being of infinity of *matter*, *not* of duration, who is all-*doing*, all-powerful, and entirely free; and its desire to communicate happiness, all possible happiness (for there is no sufficient reason why we should suppose the amount of happiness to be bestowed on the creatures, as creatures, to be less than it might be:) the necessary connection, we say, is intuitively evident. By no stretch of imagination can we conceive, that the simple, sole being of infinity of *matter*, *not* of duration, who is all-*doing*, all-powerful, and completely happy, could be the free cause of misery, or aught but happiness, to its creatures: unless we can conceive, that happiness, as happiness, can give birth to its opposite; the cause being wholly disproportionate to the effect.

5. Now, to produce, in consequence of desire to produce, all possible creaturely happiness, is to be perfectly good.

6. From all which, it is most obvious, that the simple, sole, being of infinity of *matter*, *not* of duration, who is all-*doing*, all-powerful, entirely free, and *negatively* happy, is, necessarily, *negatively* good.

7. The simple, sole, being of infinity of *matter*, *not* of duration, who is all-*doing*, all-powerful, entirely free, and *negatively* happy, is, then, necessarily, *negatively* good.

END OF THE ARGUMENT.

A CRITICAL DISCOURSE ON PROPHECY.

BY DR. ARNOLD.

THE great difficulty of the subject of Scripture Prophecy may be shortly stated. We find throughout the New Testament references made to various passages in the Old Testament, which are alleged as prophetic of Christ, or of some particulars of the Christian dispensation. Now if we turn to the context of these passages, and so endeavour to discover their meaning, according to the only sound principles of interpretation, it will often appear that they do not relate to the Messiah or to Christian times, but are either the expression of religious affections generally, such as submission, hope, love, &c., or else refer to some particular circumstances in the life and condition of the writer, or of the Jewish nation, and do not at all show that any thing more remote, or any events of a more universal and spiritual character, were designed to be propheeied.

For instance, in the account of our Lord's temptation, he is represented as allowing the application of Psalm xci. 11, 12, to himself, as a prophecy of God's miraculous care of the Messiah. Whereas, on referring to the whole Psalm, it appears to be a devout expression of the Psalmist's sense of the happiness of those who serve and love God; a sense which is expressed very strongly after the oriental manner in descriptions at once figurative and hyperbolical, although when divested of this colouring their meaning is perfectly discernible.

Again, the fifty-third chapter of Isaiah is well-known as the passage which Philip interpreted to the Ethiopean eunuch as a Christian prophecy, and which led to the eunuch's conversion. Yet, when taken along with the context, the passage, although undoubtedly difficult, seems to refer to events more closely connected with the return of the Jews from the Captivity, as that with its accompanying blessings appears to be the subject of the writer's prophecy.

Now, first, if we take these and many other similar passages to be Christian prophecies, solely on the authority of the writers of the New Testament; it is manifest not only that we cannot urge them to those who deny that authority, but that our own use and application of the prophecies must be limited to those citations which we find already applied for us in the New Testament. For unless we understand the principle on which they are applied, we can understand no more of the Old Testament than is explained in the Christian Scriptures, and if we attempt at random to explain other passages in the same way, that way appearing to be at variance with the ordinary rules of interpretation, and having been accepted by us in certain particular cases solely on the authority of those who have adopted it, a door will be instantly opened to the wildest fanaticism, and no man will have any right to reproach the comments of the Jewish Rabbies with any peculiar degree of extravagance.

Or secondly, if we at once cut the knot, and say that these passages have not really the meaning which the writers of the New Testament attach to them, that they are either referred to as affording some remarkable coincidence with the circumstances of the Christian times, or when quoted as expressly speaking of those times, are so quoted merely in compliance with a fanciful system of Scripture interpretation then prevalent amongst the Jews; we shall then, to say nothing of the pain of so judging of the writers of the New Testament, destroy a great part of our interest in the Old; we shall do away with the harmony and continuity of God's several dispensations, and deprive Christianity of a testimony which Christ himself no less than his Apostles delighted in appealing to, as one of the most satisfactory proofs of its divine origin.

Now, if on the one hand, the applications of the Old Testament made by the writers of the New can be maintained as just and true; and, on the other hand, a principle can be discovered which explains them and warrants them; which takes them out of the range of capricious and arbitrary quotation, and enables us to read the Old Testament in the same spirit as the Apostles read it, and to apply safely and surely to Christ and Christian things, passages which are not noticed in their writings; then it will be probable that the principle so answering all the conditions required is the true key to the difficulty, and we shall need no further evidence to convince us that it is so.

And if such a principle presents itself to us in the first place as the result of an a priori enquiry into the nature of Prophecy, and then when applied practically to the case before us be found to solve its difficulties; then the double proof thus afforded

would seem to be as complete as we can possibly require, and we cannot doubt that, reason and experience at once concurring in the same conclusion, that conclusion may command our assent as certainly true.

The general principle of interpretation here maintained, that of an uniform histcrical or lower, aud also of a spiritual or higher sense, has been adopted by commentators in all ages of the Church. *

The class of persons who bestow their peculiar attention on the subject of prophecy, receive perhaps in general the least sympathy from the rest. They themselves regard their subject indeed with intense interest, but they cannot prevail on many others to study it.

There is this peculiarity in the subject of Prophecy, that where it has not been studied, men's notions respecting it are even more than commonly vague. They may have snatches of notions respecting it here and there, yet even to themselves they are conscious of their unsatisfactoriness. Thea talk about the evidence of Prophecy, yet I believe it is very rare indeed to meet with any one whose faith rests much upon that evidence, or indeed who has ever really tried its validity.

Now first of all, it is a very misleading notion of Prophecy, if we regard it as an anticipation of History. History, in our common sense of the term, is busy with particular nations, times, places, actions, and even persons. If in this sense, Prophecy were a history written beforehand, it would alter the very condition of humanity, by removing from us our uncertainty as to the future; it would make us acquainted with the times and seasons to come. It is anticipated history, not in our common sense of the word but in another and far higher sense. Common History, amid a vast number of particular facts and persons, can hardly trace the general principles which are to be deduced from them. Nay, the imperfection of the characters with which history deals, naturally embarasses its general conclusions: we can trace the rise and fall of such a nation or such a city; but this is not the rise or fall of any one principle, either good or evil; but of many principles, which are partly good and partly evil. Our sympathy with the prosperity and adversity of any one people must be qualified; there is an evil about them, which triumphs in their triumph; there is a good about them, which suffers in their overthrow.

Now what history does not and cannot do, that Prophecy does, and for that very reason it is very different from history. Prophecy fixes our attention on principles, on good and evil, on truth and falsehood. Here, there is no division of feeling, no qualified sympathy; the one are deserving of our entire devotion and love, the other of our unmixed abhorrence.

Prophecy then speaks to us respecting the issue in all time of that great struggle which is the real interest of human life, the struggle between good and evil. Beset as we are by evil within us and without, it is the natural and earnest question of the human mind, what shall be the end at last? And the answer is given by Prophecy, that it shall be well at last; that there shall be a time when good shall perfectly triumph. But the answer declares also, that the struggle shall be long and hard; that there will be much to suffer before the victory be complete. The seed of the woman shall bruise the serpent's head, but the serpent notwithstanding shall first bruise his heel. So completely is the earliest prophecy recorded in Scripture, the sum and substance os to speak of the whole language of Prophecy, how diversified soever in its particular forms.

History, we have said, is busied with particular nations, persons and events; and from the study of these, extracts as well as it can, some general principles. Prophecy is busied *with general principles;* and inasmuch as particular notions, persons, and events, represent these principles up to a certain point, so far it is concerned also with them. But their mixed character, as it embarrasses and qualifies the judgment of the historian, so it must necessarily lower and qualify the promises and threatenings of the prophet.

* The spiritual occupies itself with heaven and hereafter, and may be left to wander everlastingly in the regions of the unknown according to the dictates of the imagination. The historical or lower sense was understood by Oliver Cromwell as well as Dr. Arnold. The Protector always adapted the eighty-fifth Psalm to himself and circumstances. The principle of Dr. Arnold is nothing more in fact than the use of apt quotations at the proper juncture, a result which a good memory and a power of combination, might produce out of Robinson Crusoe, or ony other book, as well as the Bible. The Bible was not in the hands of, but was often read to, the Jewish people in the temple, and from a necessarily imperfect recollection, they turned passages as best they could to present purposes. The writers of the gospels often make and put into the mouth of Jesus, quotations inapplicable as words can be to things. Dr. Arnold, in order to deceive the vulgar and not to be rude, pretends that prophecy is to history as what we call the philosophy of it is to the relation of facts.—E. L. R.

It is History, and not Prophecy, which deals with the twelve tribes of the land of Canaan, their good and evil kings, their fallings away, and rejection of Jesus: the Israel of Prophecy is Israel really and truly, who walk faithfully, and abide to the end.

Whatever scheme of interpretation we adopt for Prophecy, it is at any rate necessary that it should proceed upon some fixed principle, and not be varied according to the supposed meanings of particular passages. It is consistent to follow throughout and exclusively an historical interpretation; it is consistent also to follow exclusively a spiritual interpretation; or again it is consistent to adopt always the two together; and to say that every prophecy has its historical sense, and also its spiritual sense. But it is not consistent to interpret the same Prophecy partly historically and partly spiritually: yet this is the case in the heads of the chapters of the Bible, and as the prophecies are explained by the commentators. To say that in one verse David is spoken of, and in another Christ: that Jerusalem here means the literal city in Palestine, and there signifies heaven: that Israel in one place signifies the historical people of the Israelites, and in another place the people of God, whether Jews or Gentiles. This is absolutely foolish, and is manifestly a mere accommodation of the prophetical Scriptures to certain previously conceived notions of our own.

Now let us consider the prophecies in the thirtieth chapter of Deuteronomy, which promise to the Israelites a restoration to their own land, after they have been led into captivity, and the enjoyment of all manner of happiness in Canaan, if they should repent and keep the commandments. Take these promises in their historical sense as addressed to the historical Israel. They are as yet, it is said, unfulfilled, but they will be fulfilled hereafter. But it seems to me that they have been fulfilled already, so far as it was possible that they could be fulfilled to the historical Israel; for what is the promise? Is it not substantially the promise of the Law, "that he who doeth these things shall live by them?"

But although the full and real completion of the prophecies relating to Israel belongs to those only who shall be found to have been true Israelites, whether they belonged to the Jewish or to the Christian Israel according to the flesh; yet if any one urges, that over and above this real and adequate fulfilment there may be also a lower fulfilment again vouchsafed, even to the old historical Israel, whenever he shall turn to the Lord: then I will not attempt to deny this position, provided it be allowed that such a fulfilment is by no means necessary to the truth of Prophecy; that it is given superfluously; and that as in no one case we have a right to expect it, so if it be withheld, we ought neither to feel surprise or perplexity. Instances of such a fulfilment of Prophecy are certainly to be met with in Scripture. When Jesus said of his own disciples in his last prayer, "Those whom thou gavest me I have kept, and none of them is lost, save the son of perdition:" we cannot doubt but that the fulfilment of these words is to be found in the love which Christ showed to the souls of his apostles, that they had been kept by him from their worst enemy. Yet St. John recognizes a fulfilment of them also in the care which Christ took of their bodily safety, when he said to the soldiers who came to take him, "If ye seek me, let these go their way." So again the words in the fifty-third chapter of Isaiah, which in one sense are made to relate to Christ's Atonement, St. Matthew regards as having been fulfilled in another sense by Christ's miraculous cures: "He healed all who were sick, that it might be fulfilled which was spoken by the prophet Isaiah, saying, Himself took our infirmities and bare our sicknesses." And a third example of the same kind may be found in the literal fulfilment of the words of the twenty-second Psalm, "They parted my garments among them, and for my vesture did they cast lots." No one could reasonably have thought that Christ's death and resurrection were not a sufficient fulfilment of this Psalm, even if his hands and feet had never been literally pierced, and the soldiers had never literally divided his garments among them, or cast lots for his coat. But because there were persons who *would be more struc by such a minutet fulfilment* than by that general fulfilmen, which to us seems so far more satisfactory, therefore God was *pleased that they also should have the satisfaction* which they desired, and over and above the great and substantial fulfilment of the prophecy, he provided also those instances of minute agreement, which however thankful we may be to trace now that they have been given, we could not I think have ventured to expect beforehand.

With these examples before us, I would not dare to say that God may not be pleased to vouchsafe some great and special blessings to the remnant of the historical Israel, when they shall again be grafted in to the Israel of God. But even if none such are granted to them, the prophecies relating to the future and final blessing of Israel seem to my mind to have their only fulfilment in a future state.

It may be asked, what spiritual fulfilment can possibly be given to the latter chapters

of Ezekiel's prophecy, which speak in such detail of the plan of the new Temple, of the rules to be observed by the Priests, and of the portions of land to be enjoyed by the several tribes; particulars, all of which it may be said, can be only understood of the literal and historical Israel. A partial answer to this question may be given, by referring to the description of the heavenly Jerusalem in the book of the Revelation. There it is quite certain that the prophet is not speaking of any historical Israel, or of any literal temple; and yet we find much minuteness of detail, even to an enumeration of the several precious stones which form the foundations of the wall of the city. But if it be urged that the length of Ezekiel's vision forbids us to look upon all its descriptions as mere fanciful embellishment, and that the question still remains, for what end we can conceive those chapters to have been written, if they are merely a figurative expression of the simple truth, that God's people shall have a land, and a temple, and a priest, which shall never pass away; the only answer to be given seems to be a simple confession of our ignorance. We cannot tell now, but perhaps we may know hereafter, what the real meaning and object of Ezekiel's vision are. But the example of the Revelation, and the actual impossibility of understanding some parts of the vision literally, as they speak of such parts of the Jewish worship as have been most surely done away, may justify us in not allowing our ignorance to disturb our knowledge; in not giving up a system of interpretation which explains the prophecies of Scripture generally, because there is one prophecy to which we cannot see how to apply it; although that same prophecy repels no less any other system of interpretation, and cannot indeed be understood on the scheme of a more literal fulfilment, any more than the others which on the scheme of a spiritual fulfilment are intelligible.

With regard to Moab, Amelek, Ammon, Babylon. They are vanished out of history. Not as if the places were accursed for ever; or as if the language of utter vengeance, which we find in prophecy, was really applicable to the soil of Mesopotamia or Edom; but the people, the race, the language, the institutions, the religion, all that constitutes national personality, if I may so speak, are passed away from the earth. And if Mesopotamia were to be civilized and fertilized to-morrow, and Babylon again rebuilt, yet it could not be the old Babylon, for that has become extinct for ever. So with Egypt which now is flourishing as a country: it is not the Egypt of old times; there is a chasm not to be filled up, between the people who built the pyramids, and engraved their hieroglyphics on the obelisks, and the new nation that may occupy their land. So it is even with Greece; Christian Athens is divided, and must be, by one deep and impassible barrier, from the heathen Athens of old. Place does not make a nation, but the sameness of sympathies.

If any man discerns an agreement between certain existing facts and the literal language of prophecy, it may seem ungracious to tell him that this agreement is not the real fulfilment of Prophecy: and we may be asked at any rate, why we should disturb a belief in which error, even if it be error, may be more welcome and more edifying than truth. I suppose, however, that no thinking man will seriously mantain that error can be more edifying than truth. But I quite allow that if one opinion be clearly edifying and not clearly erroneous, while another is certainly mischievous but not certainly true, then there should be a respect entertained for the former, and we should not advance the latter except on the most urgent necessity. The conditions however of this second case are not easily to be met with: there is something of a contradiction in believing a tenet to be certainly beneficial, and yet possibly false; to be certainly mischievous and yet possibly true. The question after all is one of prbabilities; to one man's mind the apparent usefulness of an opinion so commends it that he does not like to suspect its falsehood; while another is so impressed with a belief of its falsehood, that he cannot consent to believe that it is really useful. And the only rule to be given is, that the former should have sufficient faith to allow his opinions to be questioned without fear, whilst the latter should have sufficient reverence for seeming goodness, to withold him from attacking it lightly or wantonly.

But on the present occasion if it be edifying to believe that the prophecies have their sure and adequate fulfilment, that is a belief which so far from shaking, I would earnestly labour to encourage and confirm. Nay, farther, if it be edifying to believe that they have in some instances their minute and literal as well as their large and substantial fulfilment, this too I do not deny, but fully allow; only it seems to me dangerous to rest too much upon these as on the great fulfilment of Prophecy, lest we should be shocked and our faith be troubled if in any case they are not to be found. With this preface I shall venture now to make a few remarks on some of the supposed literal fulfilments of Scripture Prophecies, in the case of Babylon, Edom, and Egypt.

It will not I suppose be denied, that,

speaking now of the historical sense of a national prophecy, the subject of the prophet's blessings or curses is what I may be allowed to call the personality of the nation, that is, the people as exhibiting a certain; character, which character they have derived in part at least from their institutions their race, and their prevailing tone of moral opinion. When, for instance, a prophet at a given period denounces woe against Babylon, the object of his denunciation is the Babylonian people as it then exists, and its institution, race, and prevailing opinion, so far as they tend to make the people what it is. And the woe denounced against Babylon must be considered I think to be substantially fulfilled, if the Babylonian people then existing, and the things which helped to give it its peculiar character, be put down and gradually extinguished.

Now this it seems to me has been actually accomplished. Babylon as a sovereign empire was put down for ever by the Persian conquest. Its influence in an active element in determining the fate of other nations was stopped at once. Moral and intellectual results in Asia have been effected only through the action of physical power; "Captive Greece made captive the fierce conqueror" is one of the peculiarities of the history of Europe. Bobylonian science, or art, or religion, whatever they may have been, became powerless over the world when the sceptre of Babylonian dominion was broken. The genius of Babylon received a deadly wound; he drooped for a while, and died.

The capture of Babylon by Cyrus took place in the year 538 before the christian era. But a hundred years afterwards, when Herodotus visited Babylonia, the city was still populous, and the surrounding country was the richest in the Persian empire. Nearly forty years later, when Xenophon followed the younger Cyrus in his expedition against his brother Artaxerxes, Babylon was still a great city, and the canals which communicated between the Euphrates and Tigris were in good repair, and navigated by corn barges. Seventy-five years afterwards the same state of things still existed: when Alexander entered Babylon, after the battle of Arbela, he found the temples indeed in ruins, but the Chaldean priests still inhabited the city as formerly, and it was still a great and wealthy capital Alexander, as it is well known ordered the temples to be restored, and planned the construction of a great harbour or wet dock in the Euphrates, with the intention of making Babylon the centre of commere between the West and the Indian ocean. His early death prevented the accomplishment of his purpose; and afterwards the foundation of Seleucia on the Tigris, which was the first capital of the Greek Syrian kings, and afterwards of those of Parthia, drew away the population from Babylon, and caused it gradually to fall into decay. In the Augustan age, more than five hundred years after its conquest by Cyrus, it was still partially inhabited; but a hundred and fifty years later, in the time of the Antonines, Pausinius says, that nothing was remaining of it except the walls and the temple of Belus. This however appears to have been an exaggeration, or else it must have been peopled again at some subsequent period; for in the fourth century of the Christian era, Ammianus Marcellinus, writing from his own personal knowledge of Mesopotamia and Assyria, classes Babylon, Ctesiphon, and Seleucia, together, as the three greatest and most famous cities of all that neighbourhood: he also speaks of the fertility of Assyria in the highest terms, describes the Euphrates as divided into three branches, all of which were nagivable, and as watering a highly cultivated country; and mentions in particular one branch that watered the heart of Babylonia, "tractus Babylonios interiores," "benefitting the lands and the surrounding cities." Thus during a period of more than eight hundred years from its conquest by Cyrus, Babylon existed as an inhabited city, and the country around it continued to be fertile and populous.

Now shall we say that during all this time the historical sense of the prophecies concerning Babylon was not fulfilled, but that they waited for a still later period; and were only completely accomplished when Babylon fell into a state of utter ruin, and the country around it became a desert? But then we must say, that so long as there remained any vestiges of the old historical Babylonians, their land was not cursed; but when they had vanished altogether, and other races, and languages, and manners, and religions, had come into their place, then the land was visited with desolation. Surely we may rather say, that the historical sense of the prophecy was substantially fulfilled when the empire of Babylon fell, when its temples were spoiled and overthrown, and its people lost their national existence, and became the mere subjects of the great king. And the hand of God as it had wrought this work, so it would not suffer it to be undone. Had Alexander accomplished his purposes, and made Babylon the seat of his empire, it is likely that the national personality of Babylon, if I may so speak, would have revived under a Greek sovereign; and that Alexander's suceessors might have become

Babylonians, as the Ptolomies did in fact become Egyptians. But this was not to be: Alexander died in the vigour of life: his attempt to revive the imperial state of Babylon was as fruitless as that of Julian to revive the temple-worship of Jerusalem; and his successors the Seleucida, instead of restoring the Babylonian empire, contributed even to the fall of the mere city, by founding a new capital at Seleucia.

Again, the historical Babylon of Prophecy having been put down when the national personality of Babylon had perished, it seems contrary to the general course of God's dealings that the curse should attach itself to the mere soil of the country when possessed by a new people, and yet should not have been felt so long as the people, for whose sake it is supposed to have been cursed, remained in existence. But this is not mere matter of speculation. Babylon was at one time the seat of a Christian Church. "The church in Babylon salutes you," says St. Peter at the close of his first Epistle. It is wholly unwarranted to fancy that in such a passage, where the language is of the simplest kind, the term Babylon is used allegorically. We know that Babylon was at that time an inhabited city, and there seems no reasonable doubt that St. Peter's Epistle was written in it. But if Babylon were the seat of a Christian Church, God himself was there; and no place is or can be accursed where God dwells. It seems to me almost shocking to conceive a Christian Church existing in a spot, the very soil of which was accursed. The sin of the old Babylon could not be so much more powerful than the grace of Christ's presence.

As therefore the prophecies respecting the historical Babylon were really and substantially fulfilled, when the Babylonian people ceased to be sovereign, and became subject, and thus exercised no further influence on the course of events or the character of nations; as the desolation of the city, and still more of the surrounding country, did not take place for many centuries, and has been at its heighth after the actual extinction of that Babylonian people against which the judgment was denounced; as, thirdly, Babylon has been the seat of a Christian Church, and thus could no longer have been accursed; and as if we regard the present desolation of the country round Babylon to have been necessary to the fulfilment of the prophecies respecting it, we must also require a similar literal fulfilment in all other cases, which it is impossible to find; it seems to me wiser and safer to say, that the real and complete fulfilment of the prophecies respecting Babylon is to be found in the complete destruction of the Babylonian power and nationality; and that those prophecies would have been accomplished as truly, if the city had continued to be inhabited, and the country had been still fruitful and populous, as it was for nearly eight hundred years after the overthrow of the empire: that therefore if any look upon the present state of the city and country to be a fulfilment of the prophecies, they should regard it as a fulfilment ex abundanti; as one of those instances, not to be drawn into a general rule, in which God has been pleased to grant an agreement of a minute and literal kind between the prediction and the event, as if for the satisfaction of those who could not appreciate agreement in more general and essential points; but that they must by no means consider the truth of Prophecy as involved in the continuance of such a minute fulfilment, nor conceive that if Mesopotamia were again to become fertile and habitable, and a new town were to be built on the site of Babylon, that it would be a revival of that Babylon against which God's judgments were denounced.

But if it be asked, why then was the language of Prophecy so strong, if it was not meant to be literally fulfilled? I answer, that the real subject of the prophecy in its highest sense is not the historical but the spiritual Babylon; and that no expressions of ruin and destruction can be too strong when applied to the world which is to be dissolved, and utterly to perish. And it will be found, I think, a general rule in all the prophecies of Scripture, that they contain expressions which will only be adequately fulfilled in their last and spiritual fulfilment; and that as applied to the lower fulfilments which precede this, they are and must be hyperbolical.

I now proceed to notice the prophecies which relate to Edom. These are to be found chiefly in Jeremiah xlix. 7—22, Ezekiel xxxv, and in the Prophecy of Obadiah; and their substance is, that because Edom had oppressed and insulted over Israel in the day of his calamity, it should be visited with heavy judgments, and laid waste, and be left desolate. The historical fulfilment of this seems to be, that Edom as a nation soon became extinct; that the Edomites who dwelt near the southern frontier of Judea were conquered by Hyrcanus, and were obliged to adopt the rites and customs of the Jews, while the larger portion of the people who lived to the south and east of the Dead Sea were confounded with the Arabian tribes, and were known by the name of Nabatæans. Petra, which was afterwards so famous, is called a Nabatæan city by Pliny and by Strabo; and Strabo describes even the Idumæans on the south

of Judea as having been originally Nabatæans; but owing to quarrels amongst themselves, they left their old country, he says, and came over to the Jews, and adopted their customs. Beyond this it does not seem possible to trace the exact fate of the Edomites; and Jerome, after briefly noticing the historical sense of the prophecy in general terms, dwells on it in detail only in the higher or spiritual sense. As far as relates to the historical Edom, the language here too is hyperbolical, nor can its fulfilment be insisted on farther than this, that while Israel continued to exist as a nation, Edom, like Amelek, and Amnon, and the other neighbouring people, gradually has perished out of history. *But since the recent discovery of the ruins of Petra, it has been contended that the desolate state of that country is a confirmation of the prophecies concerning Edom, that it should be laid waste for ever.* To this I think the objections are twofold; first, that it does not appear that Petra was ever regarded in the days of its greatness as an Edomite city, but as belonging to Arabia, and to the Arabian tribe of the Nabatæans; and, secondly, that the splendour of Petra, as appears by the existing remains, belonged to a period long subsequent to the prophecies against Edom; and it cannot surely be considered as an exact fulfilment of the severest denunciations of vengeance, that after those denunciations, the country which was the object of them should rise to a degree of wealth and splendour far greater than it had ever known before, that this prosperous condition should last for several centuries, and then should only yield to that common fate which has consigned so many cities of the east to utter desolation, after the dominion or the commerce to which they owed their greatness, have been transferred elsewhere. The ruin of Petra has not been more complete than that of Palmyra.

Historically, the most remarkable prophecies respecting Egypt speak of its judgment as not perpetual; and in this they differ wholly from those which relate to Babylon and Edom. But in Ezekiel xxix. to xxxii., they declare, that inasmuch as Egypt had been a falthless support to Israel, it should be overthrown and laid desolate, but that after forty years it should be restored again, though not to its former greatness. Now this is a striking instance of the hyperbolical language of the prophecies as far as regards the historical sense of them. The prophecy says, "I will make the land of Egypt utterly waste and desolate, from the tower of Syene even unto the borders of Ethiopia. No foot of man shall pass through it, nor foot of beast shall pass through it, neither shall it be inhabited forty years." It is perfectly evident that we are to seek for no literal fulfilment of this: but I think also that the expression "forty years" is no more to be taken literally than the other expressions; and indeed it is inconsistent to seek chronological exactness where there is evidently no historical exactness intended.

Egypt has had her periods of conquest and degradation, first under the Babylonians, and then under the Persians; but she revived after each of these visitations, first in the reign of Amasis after the Babylonian conquest: and, secondly, during the dominion of the Ptolemies, when she was again independent, powerful, and flourishing, yet never rose to that pitch of greatness to which she had attained under the empire of the Pharaohs.

Here this Reverend Doctor quietly disposes of his brother in the faith, the Rev. Keith on Prophecy, with his fifteen editions, so readily swallowed by such a large class of the public, whose belief and whose pleasure is in tracing out the fulfilment of curses. A growing evidence as they call it! These Jew-bookers have laid hold of Volney as the evidence of infidelity in favour of prophecy, because he describes the state of a country as he finds it. They send over travellers to the land which is holy, in order to spy out its nakedness. We return them the compliment, and take one of their orthodox sermons, delivered by a minister of the true church, in favour of our infidelity, and all their facts gathered from travels abroad, we can answer by a little common sense left to them at home.

Dr. Arnold gives two Appendices to his Sermons on Prophecy. In the first he mentions some of the prophecies applied by Jesus to himself and times, and says they are nothing more than appropriate quotations; many other similar passages he gives which he says would have done equally well for the occasion.

In the second Dr. A. gives the passages which, relating to the father in the old, are made to apply to the son in the new, and he says of them that the only explanation is that they are more applicable to a man than an invisible being, and therefore intended for humanity and not divinity. For example, he says—

"In Zechariah xii. 10. God describes himself as taking vengeance on the enemies of his people, and restoring Jerusalem; using the words, 'they shall *look* on me whom they have pierced.' Here again is a visible manifestation of the Godhead, and therefore St. John understands it of him,

who was pierced visibly before his own eyes with the Roman soldier's spear.

"It has been my earnest endeavour in the foregoing pages to avoid as much as possible all such questions as might be likely to engender strife; that is to say, such as are connected with the peculiar opinions of any of the various parties existing in the Church. If these are not touched upon, men can differ without hostility, they can analyse a book fairly, can disapprove of some things in it, and yet approve of others; nay, can think its main conclusions erroneous, without condemning it as unsound and mischievous. I have tried so to write on the subject of Prophecy, as not to shock even those from whom on many other points I differ widely. Once or twice I found myself on the very edge of debateable ground; but as my argument did not oblige me to enter on it, I was glad not to cross its boundaries. At the same time I need not, I trust, say, that what I have written is in no respect coloured for the purpose of conciliation: if any one agrees with the views and language of this volume, let him be assured that so far the agreement between us is real; that I hold these views and use this language as sincerely and as earnestly as he could do himself; and let him share with me the comfort of believing—for surely a great comfort it should be to Christians—that there are other points over and above the main articles of our common faith, on which we can truly have the same mind and speak the same time."—E. L. R.

The next Number will contain Lord Brougham's Dissertation on the Origin of Evil.

Henry Hetherington, London.

DISSERTATION ON THE ORIGIN OF EVIL.

BY LORD BROUGHAM.

THE question which has more than any other harrassed metaphysical reasoners, but especially theologians, and upon which it is probable that no very satisfactory conclusion will ever be reached by the human faculties, is the Origin and Sufferance of Evil. Its existence being always assumed, philosophers have formed various theories for explaining it but they have always drawn very different inferences from it. The ancient Epicureans argued against the existence of the Deity, because they held that the existence of Evil either proved him to be limited in power or of a malignant nature; either of which imperfections is inconsistent with the first notions of a divine being. In this kind of reasoning they have been followed both by the atheists and sceptics of later times. Bayle regarded the subject of evil as one of the great arsenals from whence his weapons were to be chiefly drawn. None of the articles in his famous Dictionary are more laboured than those in which he treats of this subject. *Monichian*, and still more *Paulician*, almost assume the appearance of formal treatises upon the question; and both *Marchionite* and *Zoroaster* treat of the same subject. All these articles are of considerable value; they contain the greater part of the learning upon the question; and they are distinguished by the acuteness of reasoning which was the other characterestic of their celebrated author.

Those ancient philosophers who did not agree with Epicurus in arguing from the existence of evil against the existence of a providence that superintended and influenced the destinies of the world, were put to no little difficulty in accounting for the fact which they did not deny, and yet maintaining the power of a divine ruler. The doctrine of a double principle, or of two divine beings of opposite natures, one beneficent, the other mischievous, was the solution which one class of reasoners deemed satisfactory, and to which they held themselves driven by the phenomena of the universe. Others unable to deny the existence of things which men denominate evil, both physical and moral, explain them in a different way. They maintained that physical evil only obtains the name from our imperfect and vicious or feeble dispositions; that to a wise man there is no such thing; that we may rise superior to all such grovelling notions as make us dread or repine at any events which can befal the body; that pain, sickness, loss of fortune or of reputation, exile, death itself, are only accounted ills by a weak and pampered mind; that if we find the world tiresome, or woeful, or displeasing we may at any moment quit it; and that therefore we have no right whatever to call any suffering connected with existence on earth an evil, because almost all sufferings can be borne by a patient and firm mind; since if the situation we are placed in becomes either intolerable, or upon the whole more painful than agreeable, it is our own fault that we remain in it. But these philosophers further took a view of the question which especially applied to moral evil. They considered that nothing could be more groundless than to suppose that if there were no evil there could be any good in the world; and they illustrated this position by asking how we could know anything of temperance, fortitude, or justice, unless there were such things as excess, cowardice, and injustice.

These were the doctrines of the Stoics, from whose sublime and impracticable philosophy they seemed naturally enough to flow. Aulus Gellius relates that the last-mentioned argument was expounded by Chrysippus, in his work upon providence. The answer given by Plutarch seems quite sufficient: "As well might you say that Achilles could not have a fine head of hair unless Thersites had been bald; or that one man's limbs could not be all sound if another had not the gout." In truth, the Stoical doctrine proceeds upon the assumption that all virtue is only the negative of vice; and is as absurd, if indeed it be not the very same absurdity, as the doctrine which should deny the existence of affirmative or positive truths, resolving them all into the opposite of negative propositions. Indeed, if we even were to admit this as an abstract position, the actual existence of evil would still be unnecessary to the idea, and still more to the exisience, of good. For the conception of evil, the bare idea of its possibility, would be quite sufficient, and there would be no occasion for a single example of it.

The other doctrine, that of two opposite principles, was embraced by most of the other sects, as it should seem, at some pe-

riod or other of their inquiries. Plato himself in his later works, was clearly a supporter of the system; for he held that there were at least two principles, a good and an evil; to which he added a third, the moderator or mediator between them. Whether this doctrine was, like many others, imported into Greece from the East, or was the natural growth of the schools, we cannot ascertain. Certain it is that the Greeks themselves believed it to have been taught by Zoroaster in Asia, at the least five centuries before the Trojan war; so that it had an existence there long before the name of philosophy was known in the western world. Zoroaster's doctrine agreed in every respect with Plato's; for besides Oomazes, the good, and Arimanius the evil principle, he taught that there was a third, or mediatory one, called Mithras. That it never became any part of the popular belief in Greece or Italy is quite clear. All the polytheism of those countries recognised each of the gods as authors alike of good and evil. Nor did even the chief of the divinities, under whose power the rest were placed, offer any exception to the general rule; for Jupiter not only gave good from one urn and ill from another, but he was also, according to the barbarous mythology of classical antiquity, himself a model at once of human perfections and of human vices.

After the light of the Christian religion had made some way toward supplanting the ancient polytheism, the doctrine of two principles was broached; first by Marcion who lived in the time of Adrian and Antonius Pius early in the second century; and next by Manes, a hundred years later. He was a Persian slave, who was brought into Greece, where he taught this doctrine, since known by his name, having learned it, as is said from Scythianus an Arabian. The Manichean doctrines, afterwards called also Paulician, from a great teacher of them in the seventh century, were like almost all the heresies in the primitive church, soon mixed up with gross impurities of sacred rites as well as extravagant absurdities of creed. The Manicheans were, probably as much on this account as from the spirit of religious intolerance, early the objects of severe persecution; and the Code of Justinian itself denounces capital punishment against any of the sect, if found within the Roman dominions.

It must be confessed that the theory of two principles, when kept free from the absurdities and impurities which were introduced into the Manichean doctrine, is not unnaturally adopted by men who have no aid from the light of revelation, and who are confounded by the appearance of a world where evil and good are mixed together, or seem to struggle with one another, sometimes the one prevailing, and sometimes the other; and accordingly in all countries, in the most barbarous nations, as well as among the most refined, we find plain traces of reflecting men having been driven to this solution of the difficulty. It seems upon a superficial view to be very easily deducible from the phenomena; and as the idea of infinite power, with which it is manifestly inconsistent, does by no means so naturally present itself to the mind, as long as only a very great degree of power, a power which in comparison of all human force may be termed infinite, is the attribute with which the Deity is believed to be endued, Manichean hypothesis is by no means so easily refuted. That the power of the Deity was supposed to have limits even in the systems of the most enlightened heathens is unquestionable. They, generally speaking, believed in the eternity of matter, and conceived some of its qualities to be so essentially necessary to its existence that no divine agency could alter them. They ascribed to the Deity a plastic power, a power not of creating or annihilating, but only of moulding, disposing, and moving matter. So over mind they generally gave him the like power, considering it as a kind of emanation from his own greater mind or essence, and destined to be reunited with him hereafter. Nay, over all the gods, and of superior potency to any, they conceived fate to preside; an overruling and paramount necessity, of which they formed some dark conceptions, and to which the chief of all the gods was supposed to submit. It is, indeed, extremely difficult to state precisely what the philosophic theory of theology was in Greece and Rome, because the wide difference between the esoteric and exoteric doctrines, between the belief of the learned few and the popular superstition, makes it very difficult to avoid confounding the two, and lending to the former some of the grosser errors with which the latter abounded. Nevertheless we may rely upon what has been just stated, as conveying, generally speaking, the opinion of philosophers, although some sects certainly had a still more scanty measure of belief. But we shall presently find that in the speculations of the much more enlightened moderns, Christians of course, errors of a like kind are to be traced. They constantly argue the great question of evil upon a latent assumption, that the power of the deity is restricted by some powers or qualities inherent in matter; notions analogous to that of faith are occasionally perceptible; not stated or expanded indeed into propositions, but influencing the course of the

reasoning; while the belief of infinite attributes is never kept steadily in view, except when it is called in as requisite to refute the Manichean doctrines. Some observers of the controversary have indeed not scrupled to affirm that those of whom we speak are really Manicheans without knowing it; and build their systems upon assumptions secretly borrowed from the disciples of Zoroaster, without ever stating those assumptions openly in the form of postulates or definition.

The refutation of the Manichean hypothesis is extremely easy if we be permitted to assume that both the principles which it supposes are either of infinite power or of equal power. If they are of infinite power the supposition of their co-existence involves a contradiction in terms; for the one being in opposition to the other, the power of each must be something taken from that of the other; consequently neither can be of infinite power. If, again, we only suppose both to be of equal power, and always acting against each other, there could be nothing whatever done, neither good or evil; the universe would be at a stand still; or rather no act of creation could ever have been performed, and no existence could be conceived beyond that of the two antagonist principles. Archbishop Tillotson's argument, properly speaking, amounts to this last proposition, and is applicable to equal and opposite principles, although he applies it to two beings, both infinitely powerful and counteracting one another. When he says they would tie up each other's hands, he might apply this argument to such antagonist principles if only equal, although not infinitely powerful. The hypothesis of their being both iufinitely powerful needs no such refutation; it is a contradiction in terms. But it must be recollected that the advocates of the Manichean doctrine endeavour to guard themselves against the attack by contending, that the conflict between the two principles ends in a kind of compromise, so that neither has it all his own way; there is a mixture of evil admitted by the good principle, because else the whole would be at a stand still; while there is much good admitted by the evil principle, else nothing, either good or evil, would be done. Another answer is therefore required to this theory than what Tillotson and his followers have given.

First, we must observe that this reasoning of the Manicheans proceeds upon the analogy of what we see in mortal contentions; where neither party having the power to defeat the other, each is content to yield a little to his adversary, and so, by mutual concession both are successful to some extent, and both to some extent disappointed. But in a speculation concerning the nature of the Deity, there seems no place for such notions.

Secondly, the equality of power is not an arbitrary assumption; it seems to follow from the existence of the two opposing principles. For if they are independent of one another as to existence, which they must needs be, else one would immediately destroy the other, so must they also, in each particular instance, be independent of each other, and also equal each to the other else one would have the mastery, and the influence of the other could not be perceived. To say that in some things the good principle prevails and in others the evil, is really saying nothing more than that good exists here and evil there. It does not further the argument one step, nor give anything like an explanation. For it must always be borne in mind that the whole question respecting the Origin of Evil proceeds upon the assumption of a wise, benevolent, and powerful Being having created the world. The difficulty, and the only difficulty, is, how to reconcile existing evil with such a Being's attributes; and if the Manichean only explains this by saying the good Being did what is good, and another and evil Being did what is bad in the universe, he really tells us nothing more than the fact; he does not apply his explanation to the difficulty; and he supposes the existence of a second Deity gratuitously and to no kind of purpose.

But, thirdly, in whatever light we view the hypothesis, it seems exposed to a similar objection, namely, of explaining nothing in its application, while it is wholly gratuitous in itself. It assumes, of course, that creation was the act of the good being; and it also assumes that Being's goodness to have been perfect, though his power is limited. Then as he must have known the existence of the evil principle and foreseen the certainty of misery being occasioned by his existence, why did he voluntarily create sentient beings to put them, in some respects at least, under the evil one's power, and thus be exposed to suffering? The good Being, according to this theory, is the remote cause of the evil which is endured, because but for his act of creation the evil Being could have had no subjects whereon to work mischief; so that the hypothesis wholly fails in removing, by more than one step, the difficulty which it was invented to solve.

Fourthly, there is no advantage gained to the argument by supposing two Beings, rather than one Being of a mixed nature. The facts lead to this supposition just as naturally as to the hypothesis of two prin-

ciples. The existence of the evil Being is as much a detraction from the power of the good one, as if we only at once suppose the latter to be of limited power, and that he prefers making and supporting creatures who suffer much less than they enjoy, to making no creatures at all. The supposition that he made them as happy as he could, and that not being able to make them less miserable, he yet perceived that upon the whole their existence would occasion more happiness than if they never had any being at all, will just account for the phenomena as well as the Manichean theory, and will as little as that theory assume any malevolence in the power which created and preserved the universe. If, however, it be objected that this hypothesis leaves unexplained the fetters upon the good being's power, the answer is obvious; it leaves those fetters not at all less explained than the Manichean theory does; for that theory gives no explanation of the existence of a counteracting principle, and it assumes both an antagonist power to limit the Deity's power, and a malevolent principle to set the antagonist power in motion; whereas our supposition assumes no malevolence at all, but only a restraint upon the divine power.

Fifthly, this leads us to another and most formidable objection. To conceive the eternal existence of one Being infinite in power, self-created and creating all others, is by no means impossible. Indeed as everything must have had a cause, nothing we see being by possibility self-created, we naturally mount from particulars to generals, until finally we rise to the idea of a first cause, uncreated, and self-existing, and eternal. If the phenomena compels us to affix limits to his goodness, we find it impossible to conceive limits to the power of a creative, eternal, self-existing principle. But even supposing we could form the conception of such a Being having his power limited as well as his goodness, still we can conceive no second Being independent of him. This would necessarily lead to the supposition of some third Being, above and antecedent to both, and the creator of both —the real first cause—and then the whole question would be to solve over again—why these two antagonist Beings were suffered to exist by the great Being of all?

The Manichean doctrine, then, is exposed to every objection to which a theory can be obnoxious. It is gratuitous; it is inapplicable to the facts; it supposes more causes than are necessary; it fails to explain the phenomena, leaving the difficulties exactly where it found them. Nevertheless such is the theory, how easily soever refuted when openly avowed and explicitly stated, which in various disguises appears to pervade the explanations, given of the facts by most of the other systems; nay, to form, secretly and unacknowledged, their principal ground-work. For it really makes very little difference in the matter whether we are to account for evil by holding that the Deity has created as much happiness as was consistent with "the nature of things," and has taken every means of avoiding all evil except "where it necessarily existed;" or at once give those limiting influences a separate and independent existence, and call them by a name of their own, which is the Manichean hypothesis.

The most remarkable argument on this subject, and the most distinguished both for its clear and well ordered statement, and for the systematic shape which it assumes, is that of Archbishop King. It is the great text-book of those who study this subject; and like the famous legal work of Littleton it has found an expounder yet abler and more learned than the author himself. Bishop Law's commentary is full of information, of reasoning, and of explication; nor can we easily find anything valuable upon the subject which is not contained in the volumes of that work. It will, however, only require a slight examination of the doctrines maintained by these learned and pious men, to satisfy us that they all along either assume the thing to be proved, or proceed upon suppositions quite inconsistent with the infinite power of the Deity—the only position which raises a question, and which makes the difficulty that requires to be solved.

According to all the systems as well as this one, evil is of two kinds—physical and moral. To the former class belong all the sufferings to which sentient beings are exposed from the qualities and affections of matter independent of their own acts; the latter class consists of the sufferings of whatever kind which arise from their own conduct. This division of the subject, however, is liable to one serious objection; it comprehends under the second head a class of evils which ought more properly to be ranged under the first, Nor is this a mere question of classification: it affects the whole scope of the argument. The second of the above-mentioned classes comprehends both the physical evils which human agency causes, but which it would have no power to cause unless the qualities of matter were such as to produce pain, privation, and death; and also the moral evil of guilt which may possibly exist independent of material agency, but which, whether independent or not upon that physical action, is quite seperable from it, residing wholly in the mind. Thus a person who destroys

the life of another produces physical evil by means of the constitution of matter, and moral evil is the source of his wicked action. The true arrangement then is this: Physical evil is that which depends on the constitution of matter, or only is so far connected with the constitution of mind as that the nature and existence of a sentient being must be assumed in order to its mischief being felt. And this physical evil is of two kinds; that which originates in human action, and that which is independent of human action, befalling us from the unalterable course of nature. Of the former class are the pains, privations, and destruction inflicted by men one upon another; of the latter class are diseases, old age, and death. Moral evil consists in the crimes, whether of commission or omission, which men are guilty of—including under the latter head those sufferings which we endure from ill-regulated minds through want of fortitude or self-control. It is clear that as far as the question of the origin of evil is concerned the first of these two classes, physical evil, depends upon the properties of matter, and the last upon those of mind. The second as well as the first subdivision of the physical class depends upon matter; because however ill-disposed the agent's mind may be, he could inflict the mischief only in consequence of the constitution of matter. Therefore, the Being who created matter enabled him to perpetrate the evil even admitting that this Being did not by creating the mind also give rise to the evil disposition; and admitting that, as far as regards this disposition it has the same origin with the evil of the second class, or moral evil, the acts of a rational agent.

It is quite true that many reasoners refuse to allow any distinction between the evil produced by natural causes and the evils caused by rational agents, whether as regards their own guilt, or the mischief it caused to others. Those reasoners deny that the creation of man's will and the endowing it with liberty explains anything; they hold that the creation of a mind whose will is to do evil, amounts to the same thing, and belongs to the same class, with the creation of matter whose nature is to give pain and misery. But this position which involves the doctrine of necessity, must, at the very least, admit of one modification. Where no human agency whatever is interposed, and the calamity comes without any one being to blame for it, the mischief seems a step, and a large step, nearer the creative or the superintending cause, because it is, as far as men go, altogether inevitable. The main tendency of the argument therefore is confined to physical evil; and this has always been found the most difficult to account for, that is to reconcile with the government of a perfectly good and powerful Being. It would indeed be very easily explained and the reconcilement would be readily made, if we were at liberty to suppose matter independent in its existence, and in certain qualities, of the divine control; but this would be to suppose the Deity's power limited and imperfect, which is just one horn of the Epicurean dilemma, "Aut vult et non potest;" and in assuming this, we do not so much beg the question as wholly give it up and admit we cannot solve the difficulty. Yet obvious as this is, we shall presently see that the reasoners who have undertaken the solution, and especially King and Law, under such phrases as "the nature of things," and "the laws of the material universe," have been constantly through the whole argument, guilty of this *petitio principii* (begging the question), or rather this abandonment of the whole question, and never more so than at the very moment when they complacently plumed themselves upon having overcome the difficulty.

Having premised these observations for the purpose of clearing the ground and avoiding confusion in the argument, we may now consider that Archbishop King's theory is in both its parts; for there are in truth two distinct explanations, the one resembling an argument *a priori*, the other an argument *a posteriori*. It is, however, not a little remarkable that Bishop Law, in the admirable abstract or analysis which he gives of the archbishop's treatise at the end of his preface, begins with the second branch, omitting all mention of the first, as if he considered it to be merely introductory matter; and yet his fourteenth note (t. cap. 1. s. 3.) shows that he was aware of its being an argument wholly independent of the rest of the reasonings; for he there says that the author had given one demonstration *a priori*, and that no difficulties raised by an examination of the phenomena, no objection *a posteriori*, ought to overrule it, unless these difficulties are equally certain and clear with the demonstration, and admit of no solution consistent with that demonstration.

The necessity of a first cause being shown, and it being evident that therefore this cause is uncreated and self-existent, and independent of any other, the conclusion is next drawn that its power must be infinite. This is shown by the consideration that there is no other antecedent cause, and no other principle which was not created by the first cause, and consequently which was not of inferior power; therefore there is nothing which can limit the power of the first cause; and there being no limiter or

restrainer, there can be no limitation or restriction.

Again, the infinity of the Deity's power is attempted to be proved in another way. The number of possible things is infinite: but every possibility implies a power to do the possible thing; and as one possible thing implies a power to do it, an infinite number of possible things implies an infinite power. Or as Descartes and his followers put it, we can have no idea of anything that has not either an actual or a possible existence; but we have an idea of a Being of infinite perfection; therefore he must actually exist; for otherwise there would be one perfection wanting, and so he would not be infinite, which he either is actually or possibly. It is needless to remark that this whole argument, whatever may be said of the former one, is a pure fallacy, and a *petitio principii* throughout. The Cartesian form of it is the most glaringly fallacious, and indeed exposes itself; for by that reasoning we might prove the existence of a fiery dragon or any other phantom of the brain. But even King's more concealed sophism is equally absurd. What ground is there for saying that the number of possible things is infinite? he adds "at least in power," which means either nothing or only that we have the power of conceiving an infinite number of possibilities. But because we can conceive or fancy an infinity of possibilities, does it follow that there actually exists this infinity? The whole argument is unworthy of a moment's consideration. The other is more plausible, that restriction implies a restraining power. But even this is not satisfactory when closely examined. For although the first cause must be self-existent and of eternal duration, we only are driven by the necessity of supposing a cause whereon all the argument rests, to suppose one capable of causing all that actually exists; and therefore to extend this inference and suppose that the cause is of infinite power seems gratuitous. Nor is it necessary to suppose another power limiting its efficacy, if we do not find it necessary to suppose its own constitution and essence such as we term infinitely powerful. However, after noticing this manifest defect in the fundamental part of the argument, that which infers infinite power, let us for the present assume the position to be proved either by these or by any other reasons, and see if the structure raised upon it, is such as can stand the test of examination.

Thus then, an infinitely powerful Being exists, and he was the creator of the universe; but to incline him towards the creation there could be no possible motive of happiness to himself, and he must, says King, have either sought his own happiness or that of the universe which he made. Therefore his own ideas must have been the communication of happiness to the creature. He could only desire to exercise his attributes without, or externally to himself, which before creating other beings he could not do. But this could only gratify his nature, which wants nothing being perfect in itself, by communicating his goodness and providing for the happiness of other sentient beings created by him for this purpose. Therefore, says King, "it manifestly follows that the world is as well as it could be made by infinite power and goodness; for since the exercise of the divine power and the communication of his goodness are the ends for which the world is formed, there is no doubt but God has attained these ends." And again, "If then any thing inconvenient or incommodious be now, or was from the beginning in it, that certainly could not be hindered or removed even by infinite power, wisdom, and goodness."

Now certainly no one can deny, that if God be infinitely powerful and also infinitely good, it must follow that whatever looks like evil, either is not really evil, or that it is such as infinite power could not avoid. This is implied in the very terms of the hypothesis. It may also be admitted that if the Deity's only object in his dispensation be the happiness of his creatures, the same conclusion follows even without assuming his nature to be infinitely good; for we admit what, for the purpose of the argument, is the same thing, namely, that there entered no evil into his design in creating or maintaining the universe. But all this really assumes the very thing to be proved. King gets over the difficulty and reaches his conclusion by saying, "The Deity could have only one of two objects—his own happiness or that of his creatures;"—The sceptic makes answer, "He might have another object, namely, the misery of his creatures; and then the whole question is, whether or not he had this other object; or, which is the same thing whether or not his nature is perfectly good. It must never be forgotten that unless evil exists there is nothing to dispute about — the question falls. The whole difficulty arises from the admission that evil exists, or what we call evil exists. From this we inquire whether or not the author of it can be perfectly benevolent? or if he be, with what view he has created it? This assumes him to be infinitely powerful, or at least powerful enough to have prevented the evil; but indeed we are now arguing with the archbishop on the supposition that he has proved the Deity

to be of infinite power. The sceptic rests upon his dilemma, and either alternative, limited power or limited goodness, satisfies him.

It is quite plain, therefore, that King has assumed the thing to be proved in his first argument, or argument *a priori*. For he proceeds upon the postulates that the Deity is infinitely good, and that he only had human happiness in view when he made the world. Either supposition would have served his purpose; and making either would have been taking for granted the whole matter in dispute. But he has assumed both; and it must be added, he has made his assumption of both as if he was only laying down a single position. This part of the work is certainly more slovenly than the rest. It is the third section of the first chapter.

It is certainly not from any reluctance to admit the existence of evil that the learned author and his able commentator have been led into this inconclusive course of reasoning. We shall nowhere find more striking expositions of the state of things in this respect, nor more gloomy descriptions of our condition, than in their celebrated work. "Whence so many inaccuracies (says the archbishop) in the work of a most good and powerful God? Whence that perpetual war between the very elements, between animals, between men? Whence errors, miseries, and vices, the constant companions of human life from its infancy? Whence good to evil men, evil to the good? If we behold anything irregular in the work of men, if any machine serves not the end it were made for, if we find something in it repugnant to itself or others, we attribute that to the ignorance, impatience, or malice of the workman. But since these qualities have no place in God, how come they to have place in anything? Or why does God, suffer his works to be deformed by them?" —(Chap. ii. s. 8.) Bishop Law in his admirable preface still more cogently puts the case: "When I inquire how I got into the world, and came to be what I am, I am told that an absolutely perfect being produced me out of nothing, and placed me here on purpose to communicate some part of his happiness to me, and to make me in some manner like himself. This end is not obtained— the direct contrary appears —I find myself surrounded with nothing but perplexity, want and misery— by whose fault I know not—how to better myself I cannot tell. What notions of good and goodness can this afford me? What ideas of religion? What hopes of a future state? For if God's aim in producing me be entirely unknown, if it be either his glory (as some will have it), which my present state is far from advancing, nor mine own good, which the same is equally inconsistent with, how know I what I have to do here, or indeed in what manner I must endeavour to please him? Or why should I endeavour it at all? For if I must be miserable in this world, what security have I that I shall not be so in another too, (if there be one,) since, if it were the will of my Almighty Creator, I might (for aught I see) have been happy in both."—(Pref. viii.)

The question thus is stated. The difficulty is raised in its full and formidable magnitude by both these learned and able men; that they have signally failed to lay it by the argument *a priori* is plain. Indeed it seems wholly impossible ever to answer by an argument *a priori* any objection whatever which arises altogether out of the facts made known to us by experience alone, and which are therefore in the nature of contingent truths, resting upon contingent evidence, while all demonstrations *a priori* must necessarily proceed upon mathematical truths. Let us now see if their labours have been more successful in applying to the solution of the difficulty the reasoning *a posteriori*.

Archbishop King divides evil into three kinds—imperfection, natural evil, and moral evil—including under the last head all the physical evils that arise from human actions, as well as the evils which consists in the guilt of those actions.

The existence of imperfection is stated to be necessary, because everything which is created and not self-existent must be imperfect; consequently every work of the Deity, in other words, everything but the Deity himself, must have imperfection in its nature. Nor is the existence of some beings which are imperfect any interference with the attributes of others. Nor the existence of beings with many imperfections any interference with others having pre-eminence, The goodness of the Deity therefore is not impugned by the existence of various orders of created beings more or less approaching to perfection. His creating none at all would have left the universe less admireable and containing less happiness than it now does. Therefore, the act of mere benevolence which called those various orders into existence is not impeached in respect of goodness any more than of power by the variety of the attributes possessed by the different beings created.

He now proceeds to grapple with the real difficulty of the question. And it is truly astonishing to find this acute metaphysician begin with an assumption which entirely begs that question. As imperfection, says he, arises from created beings having been made out of nothing, so natural

evils arise "from all natural things having a relation to matter, and on this account being necessarily subject to natural evil." As long as matter is subject to motion, it must be the subject of generation and corruption. "These and all other natural evils," says the author, "are so necessarily connected with the material origin of things that they cannot be separated from it, and thus the structure of the world either ought not to have been formed at all, or these evils must have been tolerated without any imputation on the divine power and goodness." Again, he says, "corruption could not be avoided without violence done to the laws of motion and the nature of matter." Again, "All manner of inconveniences could not be avoided because of the imperfection of matter and the nature of motion. That state of things were therefore preferable which was attained with the fewest and the least inconveniences." Then follows a kind of menace, "And who but a very rash indiscreet person will affirm that God has not made choice of this?"—when every one must perceive that the bare propounding of the question concerning evil calls upon us to exercise this temerity and commit this indiscretion.—(Chap. iv. s. 1, div. 7.) He then goes into more detail as to particular cases of natural evil; but all are handled in the same way. Thus death is explained by saying that the bodies of animals are a kind of vessels which contain fluids in motion, and being broken, the fluids are spilt and the motions cease; "because by the native imperfection of matter it is capable of dissolution, and the spilling and stagnation must necessarily follow, and with it animal life must cease."—(Chap. iv. s. 3.) Disease is dealt with in like manner. "It could not be avoided unless animals had been made of a quite different frame and constitution."—(Chap. iv. s. 7.) The whole reasoning is summed up in the concluding section of this part, where the author somewhat triumphantly says, "The difficult question then, whence comes evil? is not unanswerable. For it arises from the very nature and constitution of created beings, and could not be avoided without a contradiction."—(Chap. iv. s. 9.) To this the commentary of Bishop Law adds (Note 41), "that natural evil has been shewn to be, in every case, unavoidable, without introducing into the system a greater evil."

It is certain that many persons, led away by the authority of a great name, have been accustomed to regard this work as a text-book, and have appealed to Archbishop King and his learned commentator as having solved the question. So many men have referred to the "Principia" as showing the motions of the heavenly bodies, who never read, or indeed could read, a page of that immortal work. But no man ever did open it who could read it and find himself disappointed in any one particular; the whole demonstration is perfect; not a link is wanting; nothing is assumed. How different the case here! We open the work of the prelate and find it from the first to last a chain of gratuitous assumptions, and, of the main point, nothing whatever is either proved or explained. Evil arises, he says, from the nature of matter. Who doubts it? But is not the whole question why matter was created with such properties as of necessity to produce evil? It was impossible, says he, to avoid it consistently with the laws of motion and matter. Unquestionably; but the whole dispute is upon those laws. If indeed the laws of nature, the existing constitution of the material world, were assumed as necessary, and as binding upon the Deity, how is it possible that any question ever could have been raised? The Deity having the power to make those laws, to endow matter with that constitution, and having also the power to make different laws and to give matter another constitution, the whole question is, how his choosing to create the present existing order of things—the laws and the constitution which we find to prevail—can be reconciled with perfect goodness. The whole argument of the archbishop assumes that matter and its laws are independent of the Deity; and the only conclusion to which the enquiry leads us is that the Creator has made a world with as little of evil in it as the nature of things—that is, as the laws of nature and matter—allowed him; which is nonsense, if those laws were made by him, and leaves the question where it was, or rather solves it by giving up the omnipotence of the Creator, if these laws were binding upon him.

It must be added, however, that Dr. King and Dr. Law are not singular in pursuing this most inconclusive course of reasoning.

Thus Dr. J. Clarke, in his treatise on natural evil, quoted by Bishop Law (Note 32), shows how mischiefs arise from the laws of matter; and says this could not be avoided "without altering those primarary laws, i. e. making it something else than what it is, or changing it into another form; the result of which would only be to render it liable to evils of another kind against which the same objections would equally lie." So Dr. J. Burnett, in his discourses on evil, at the Boyle Lecture (vol. ii. p. 201), conceives that he explains death by saying that the materials of which the body is composed "cannot last beyond seventy years, or thereabouts,

and it was originally intended that we should die at that age." Pain, too, he imagines is accounted for by observing that we are endowed with feelings, and that if we could not feel pain so neither could we pleasure (p. 202). Again he says that there are certain qualities which "in the nature of things matter is uncapable of" (p. 207). And as if he really felt the pressure of this difficulty, he at length comes to this conclusion, that life is a free gift, which we had no right to exact, and which the Deity lay under no necessity to grant, therefore we must take it with the conditions annexed (p. 210); which is undeniably true, but is excluding the discussion and not answering the question proposed. Nor must it be forgotten that some reasoners deal strangely with the facts. Thus Derham, in his "Physico-Theology," explaining the use of poison in snakes, first desires us to bear in mind that many venomous ones are of use medicinally in stubborn diseases, which is not true, and if it were, would prove nothing, unless the venom, not the flesh, were proved to be medicinal; and then says, they are "scourges upon ungrateful and sinful men;" adding the truly astounding absurdity, "that the nations which know not God are the most annoyed with noxious reptiles and other pernicious creatures." (Book ix. c. 1); which if it were true would raise a double difficulty, by showing that one people was scourged because another had neglected to preach the gospel among them. Dr. J. Burnett, too, accounts for animals being suffered to be killed as food for man, by affirming that they thereby gain all the care which man is thus led to bestow upon them, and so are, on the whole, the better for being eaten. (Boyle Lecture, II. 207). But the most singular error has perhaps been fallen into by Dr. Sherlock, and the most unhappy —which yet Bishop Law has cited as a sufficient answer to the objection respecting death: "It is a great instrument of government, and makes men afraid of committing such villanies as the laws of their country have made capital (Note 34.)" So that the greatest error in the criminal legislation of all countries forms part of the divine providence, and man has at length discovered, by the light of reason, the folly and the wickedness of using an instrument expressly created by divine Omniscience to be abused!

The remaining portion of King's work, filling the second volume of Bishop Law's edition, is devoted to the explanation of Moral Evil; and here the gratuitous assumption of the "nature of things," and the "laws of nature," more or less pervade the whole as in the former parts of the Inquiry.

The fundamental position of the whole is, that man having been endowed with free will, his happiness consists in making due elections, or in the right exercise of that free will. Five causes are then given of undue elections, in which of course his misery consists as far as that depends on himself; these causes are, error, negligence, over-indulgence of free choice, obstinacy or bad habit, and the importunity of natural appetites; which last, it must in passing be remarked, belongs to the head of physical evil, and cannot be assumed in this discussion without begging the question. The great difficulty is then stated and grappled with, namely, how to reconcile these undue elections with divine goodness. The objector states that free will might exist without the power of making undue elections, he being suffered to range, as it were, only among lawful objects of choice. But the answer to this seems sound, that such a will would only be free in name; it would be free to choose among certain things, but would not be free-will. The objector again urges, that either the choice is free and may fall upon evil objects, against the goodness of God, or it is so restrained as only to fall on good objects, against freedom of the will King's solution is, that more evil would result from preventing these undue elections than from suffering them, and so the Deity has only done the best he could in the circumstances; a solution obviously liable to the same objection as that respecting Natural Evil. There are three ways, says the archbishop, in which undue elections might have been prevented; not creating a free agent—constant interference with his free-will—removing him to another state where he would not be tempted to go astray in his choice. A fourth mode may, however, be suggested—creating a free-agent without any inclination to evil, or any temptation from external objects. When our author disposes of the second method, by stating that it assumes a constant miracle, as great in the moral as altering the course of the planets hourly would be in the material universe, nothing can be more sound or more satisfactory. But when he argues that our whole happiness consists in a consciousness of freedom of election, and that we should never know happiness were we restrained in any particular, it seems wholly inconceivable how he should have omitted to consider the prodigious comfort of a state in which we should be guaranteed against any error or impropriety of choice; a state in which we should both be unable to go astray and always feel conscious of that security. He, however, begs the question most manifestly in dealing with the two other methods stated, by which undue elections might have been precluded. "You would have freedom," says he, "without any in-

clination to sin; but it may justly be doubted if this is possible *in the present state of things*," (ch. v. s. 5, sub. 2); and again, in answering the question why God did not remove us into another state where no temptation could seduce us, he says: "It is plain that in *the present state of things* it is impossible for men to live without natural evils or the danger of sinning." (Ib.) Now the whole question arises upon the constitution of the present state of things. If that is allowed to be inevitable, or is taken as a datum in the discussion, there ceases to be any question at all.

The doctrine of a chain of being is enlarged upon, and with much felicity of illustration. But it only wraps up the difficulty in other words, without solving it. For then the question becomes this—Why did the Deity create such a chain as could not be filled up without misery? It is, indeed, merely restating the fact of evil existing; for whether we say there is suffering among sentient beings—or the universe consists of beings more or less happy, more or less miserable—or there exists a chain of beings varying in perfection and in felicity—it is manifestly all one proposition. The remark of Bayle upon this view of the subject is really not at all unsound, and is eminently ingenious: "Would you defend a king who should confine all his subjects of a certain age in dungeons, upon the ground that if he did not, many of the cells he had built must remain empty?" The answer of Bishop Law to this remark is by no means satisfactory. He says it assumes that more misery than happiness exists. Now, in this view of the question, the balance is quite immaterial. The existence of any evil at all raises the question as much as the preponderance of evil over good, because the question conceives a perfectly good Being, and asks how such a Being can have permitted any evil at all. Upon this part of the subject both King and Law have fallen into an error which recent discoveries place in a singularly clear light. They say that the argument they are dealing with, would lead to leaving the earth to the brutes without human inhabitants. But the recent discoveries in Fossil Osteology have proved that the earth, for ages before the last 5,000 or 6,000 years, was left to the lower animals; nay, that in a still earlier period of its existence no animal life at all was maintained upon its surface. So that, in fact, the foundation is removed of the *reductio ad absurdum* attempted by the learned prelates.

A singular argument is used towards the latter end of the enquiry. When the Deity, it is said, resolved to create other beings, He must of necessity tolerate imperfect natures in his handiwork, just as he must the equality of a circle's radii when he drew a circle. Who does not perceive the difference? The meaning of the word circle is that the radii are all equal; this equality is a necessary truth. But it is not shown that men could not exist without the imperfections they labour under. Yet this is the argument suggested by these authors while complaining (ch. v. s. 5, sub. 7, div. 7), that Lactantius had not sufficiently answered the Epicurean dilemma; it is the substitute propounded to supply that father's deficiency.—"When, therefore," says the archbishop, "matter, motion, and free will are constituted, the Deity must necessarily permit corruption of things and the abuse of liberty, or something worse, for these cannot be separated without a contradiction, and God is no more important than because he cannot separate equality of radii from a circle." (Ch. v. s. 5, subs. 7.) If he could not have created evil, he would not have been omnipotent; if he would not, he must let his power lie idle; and rejecting evil have rejected all the good. "Thus (exclaims the author with triumph and self-complacency) then vanishes this Herculean argument, which induced the Epicureans to discard the good Deity, and the Manicheans to substitute an evil one." (Ib. subs. 7, *sub. fine*). Nor is the explanation rendered more satisfactory, or indeed more intelligible, by the concluding passage of all, in which we are told that "from a conflict of two properties, namely, omnipotence and goodness, evils necessarily arise. These attributes amicably conspire together, and yet restrain and limit each other." It might have been expected from hence that no evil at all should be found to exist. "There is a kind of struggle and opposition between them, whereof the evils in nature bear the shadow and resemblance. Here then, and no where else, may we find the primary and most certain rise and origin of evils." Such is this celebrated work; and it may safely be affirmed that a more complete failure to overcome a great and admitted difficulty—a more unsatisfactory solution of an important question—is not to be found in the whole history of metaphysical science.

Among the authors who have treated of this subject, a high place is justly given to Archdeacon Balguy, whose work on Divine Benevolence is always referred to by Dr. Paley with great commendation. But certain it is that this learned and pious writer either had never formed to himself a very precise notion of the real question under discussion, namely, the compatibility of the appearances which we see and which we consider as evil, with a Being infinitely powerful as well as good; or he had in his

mind some opinions respecting the divine nature, opinions of a limitary kind, which he does not state distinctly, although he constantly suffers them to influence his reasonings. Hence, whenever he comes close to the real difficulty he appears to beg the question. A very few instances of what really pervades the whole work, will suffice to show how unsatisfactory its general scope is, although it contains, like the treatise of Dr. King and Dr. Law's Commentary, many valuable observations on the details of the subject.

And first we may perceive that what he terms a "*previous remark*," and desires the reader "to carry along through the *whole* proof of divine benevolence," really contains a statement that the difficulty is to be evaded and not met. "An intention of producing good (says he) will be sufficiently apparent in any particular instance if the thing considered can neither be changed nor taken away without loss or harm, *all other things continuing the same*. Should you suppose *various* things in the system changed *at once*, you can neither judge of the possibility nor the consequences of the changes, having no degree of experience to direct you." Now assuredly this postulate makes the whole question as easy a one as ever metaphysician or naturalist had to solve. For it is no longer—Why did a powerful and benevolent Being create a world in which there is evil—but only—The world being given, how far are its different arrangements consistent with one another? According to this, the earthquake at Lisbon, Voltaire's favourite instance, destroyed thousands of persons, because it is in the nature of things that subterraneous vapours should explode, and that when houses fall on human beings they should be killed. Then if Dr. Balguy goes to his other argument, on which he often dwells, that if this nature were altered, we cannot possibly tell whether worse might not ensue; this, too, is assuming a limited power in the Deity, contrary to the hypothesis. It may most justly be said, that if there be any one supposition necessarily excluded from the whole argument, it is the fundamental supposition of the "previous remark," namely, "all other things continuing the same."

But see how this assumption pervades and paralyses the whole argument, rendering it utterly inconclusive. The author is to answer an objection derived from the constitution of our appetites for food, and his reply is, that "we cannot tell how far it was *possible* for the stomachs and palates of animals to be differently formed, unless by some remedy worse than the disease." Again, upon the question of pain: "How do we know that it was *possible* for the uneasy sensation to be confined to particular cases." So we meet the same fallacy under another form, as evil being the result of "general principles." But no one has ever pushed this so far as Dr. Balguy, for he says, "that in a government so conducted, many events are likely to happen contrary to the intention of its author." He now calls in the aid of chance, or accident—"It is probable," he says, "that God should be good, for evil is more likely to be *accidental* than appears from experience in the conduct of men." Indeed his fundamental position of the Deity's benevolence is rested upon this foundation, that "*pleasures only* were intended, and that the pains are accidental consequences although the means of producing pleasures." The same recourse to accident is repeatedly had. Thus, "the events to which we are exposed in this imperfect state appear to be the *accidental* not natural effects of our frame and condition." Now can any one thing be more manifest than that the very first notion of a wise and powerful Being excludes all such assumptions as things happening contrary to His intention; and that when we use the word chance or accident, which only means our human ignorance of causes, we at once give up the whole question, as if we said, "It is a subject about which we know nothing." So again as to power. "A good design is more *difficult* to be executed, and therefore more likely to be executed *imperfectly*, than an evil one, that is, with a mixture of effects foreign to the design and opposite to it." This at once assumes the Deity to be powerless. But a general statement is afterwards made more distinctly to the same effect. "Most sure it is that he can do all things possible. But are we in any degree competent judges of the bounds of possibility." So again under another form nature is introduced as something different from its author, and offering limits to his power. "It is plainly not the method of nature to obtain her ends instantaneously." Passing over such propositions as that "*useless* evil is a thing never seen," (when the whole question is why the same ends were not attained without evil), and a variety of other subordinate assumptions contrary to the hypothesis, we may rest with this general statement, which almost every page of Dr. Balguy's book bears out, that the question which he has set himself to solve is anything rather than the real one touching the Origin of Evil; and that this attempt at a solution is as ineffectual as any of those which we have been considering.

Is then the question wholly incapable of solution, which all these learned and ingenious men have so entirely failed in solving? Must the difficulty remain for ever

unsurmounted, and only be approached to discover that it is insuperable? Must the subject, of all others the most interesting for us to know well, be to us always as a sealed book, of which we can never know anything? From the nature of the thing—from the question relating to the operation of a power which, to our limited faculties, must ever be incomprehensible—there seems too much reason for believing that nothing precise or satisfactory ever will be attained by human reason regarding this great argument; and that the bounds which limit our views will only be passed when we have quitted the encumbrances of our mortal state, and are permitted to survey those regions beyond the sphere of our present circumscribed existence. The other branch of Natural Theology, that which investigates the evidences of Intelligence and Design, and leads us to a clear apprehension of the Deity's power and wisdom, is as satisfactorily cultivated as any other department of science, rests upon the same species of proof, and affords results as precise as they are sublime. This branch will never be distinctly known, and will always so dissapoint the inquirer as to render the lights of Revelation peculiarly acceptable, although even those lights leave much of it still involved in darkness—still mysterious aud obscure.

Yet let us endeavour to suggest some possible explication, while we admit that nothing certain, nothing entirely satisfactory can be reached. The failure of the great writers whose works we have been contemplating may well teach us humility, make us distrust ourselves, and moderate within us any sanguine hopes of success. But they should not make us wholly despair of at least showing in what direction the solution of the difficulty is to be sought, and whereabouts it will probably be found situated, when our feeble reason shall be strengthened and expanded. For one cause of their discomfiture certainly has been their aiming too high, attempting a complete solution of a problem which only admitted of approximation, and discussion of limits.

It is admitted on all hands that the demonstration is complete which shows the existence of intelligence and design in the universe. The structure of the eye and ear in exact conformity to the laws of optics and acoustics, shows as clearly as any experiment can show anything, that the source, cause, or origin is common both to the properties of light and the formation of the lenses and retina in the eye—both to the properties of sound and the tympanum, malleus, incus, and stapes of the year. No doubt whatever can exist upon the subject, any more than, if we saw a particular order issued to a body of men to perform certain uncommon evolutions, and afterwards saw the same body performing those same evolutions, we could doubt their having received the order. A designing and intelligent and skilful author of these admirably adapted works is equally a clear inference from the same facts. We can no more doubt it than we can question, when we see a mill grinding corn into flour, that the machinery was made by some one who designed by means of it to prepare the materials of bread. The same conclusions are drawn in a vast variety of other instances, both with respect to the parts of human and other bodies, and with respect to most of the other arrangements of nature. Similar conclusions are also drawn from our consciousness, and the knowledge which it gives us of the structure of the mind. Thus we find that attention quickens memory and enables us to recollect; and that habit renders all exertions and all acquisitions easy, beside having the effect of alleviating pain.

But when we carry our survey into other parts, whether of the natural or moral system, we cannot discover any design at all. We frequently perceive structures the use of which we know nothing about; parts of the animal frame that apparently have no functions to perform—nay that are the source of pain without yielding any perceptible advantage; arrangements and movements of bodies which are of one particular kind, and yet we are quite at a loss to discern any reason why they might not have been of many other descriptions; operations of nature that seem to serve no purpose whatever; and other operations and other arrangements, chosen equally without any beneficial view, and yet which often give rise to much apparent confusion and mischief. Now, the question is, *first* whether in any one of these cases of arrangement and structures with no visible object at all, we can for a moment suppose that there really is no object answered, or only conceive that we have been unable to discover it? *Secondly*, whether in the cases where mischief sometimes is perceived, and no other purpose appears to be effected, we do not almost as uniformly lay the blame on our own ignorance, and conclude, not that the arrangement was made without any design, and that mischief arises without any contriver, but that if he knew the whole case we should find a design and contrivance, and also that the apparent mischief would sink in to the general good? It is not necessary to admit, for our present purpose, this latter proposition, though it brings us closer to the matter in hand; it is sufficient

for the present to admit, what no one doubts, that when a part of the body, for instance, is discovered, to which, like the spleen, we cannot assign any function in the animal system, we never think of concluding that it is made for no use, but only that we have as yet not been able to discover its use.

Now let us ask, why do we arrive, and without any hesitation whatever, or any exception whatever, always and immediately arrive at this conclusion respecting intelligence and design? Nothing could be more unphilosophical, nay more groundless, than such a process of reasoning, if we had only been able to trace design in one or two instances; for instance, if we found only the eye to show proofs of contrivance, it would be wholly gratuitous, when we saw the ear, to assume that it was adapted to the nature of sound, and still more so, if, on examination, we perceived it bore no perceptible relation to the laws of acoustics. The proof of contrivance in one particular is nothing like a proof, nay, does not even furnish the least presumption of contrivance in other particulars; because, *a priori*, it is just as easy to suppose one part of nature to be designed for a purpose, and another part, nay all other parts, to be formed at random and without any contrivance, as to suppose that the formation of the whole is governed by design. Why then, do we, invariably and undoubtedly, adopt the course of reasoning which has been mentioned, and never for a moment suspect anything to be formed without some reason—some rational purpose? The only ground of this belief is, that we have been able distinctly to trace design in so vast a majority of cases as leaves us no power of doubting that, if our faculties had been sufficiently powerful, or our investigation sufficiently diligent, we should also have been able to trace it in those comparatively few instances respecting which we still are in the dark.

It may be worth while to give a few instances of the ignorance in which we once were of design in some important arrangements of nature, and of the knowledge which we now possess to show the purpose of their formation. Before Sir Isaac Newton's optical discoveries we could not tell why the structure of the eye was so complex, and why several lenses and humours were required to form a picture of objects upon the retina. Indeed, until Dolland's subsequent discovery of the achromatic effect of combining various glasses, and Mr. Blair's still more recent experiments on the powers of different refracting media, we were not able distinctly to perceive the operation and use of the complicacy in the structure of the eye. We now well understand its nature, and are able to comprehend how that which had at one time, nay for ages, seemed to be an unnecessary complexity, forms the most perfect of all optical instruments, and according to the most certain laws of refraction and of dispersion.

So, too, we had observed for some centuries the forms of the orbits in which the heavenly bodies move, and we had found these to be ellipses with a very small eccentricity. But why this was the form of those orbits no one could even conjecture. If any person, the most deeply skilled in mathematical science, and the most internally convinced of the universal prevalence of design and contrivance in the structure of the universe, had been asked what reason there was for the planets moving in ellipses so nearly approaching to circles, he could not have given any good reason, at least beyond a guess. The force of gravitation, even admitting that to be as it were a condition of the creation of matter, would have made those bodies revolve in ellipses of any degree of eccentricity just as well, provided the angle and the force of projection had been varied. Then why was this form rather than any other chosen? No one knew; yet no one doubted that there was ample reason for it. Accordingly the sublime discoveries of Lagrange and La Place have shown us that this small eccentricity is one material element in the formula by which it is shown that all the irregularities of the system are periodical, and that the deviation never can exceed a certain amount on either hand.

But again while we are ignorant of this, perhaps the most sublime truth in all science, we were always arguing as if the system had an imperfection, as if the disturbing forces of the different planets and the sun, acting on one another, constantly changed the orbits of each planet, and must, in a course of ages, work the destruction of the whole planetary arrangement which we had contemplated with so great admiration and with awe. It was deemed enough if we could show that this derangement must be extremely slow, and that, therefore, the system might last for many more ages without requiring any interposition of omnipotent skill to preserve it by rectifying its motions. Thus one of the most celebrated writers above cited argues that, "from the nature of gravitation and the concentricity of the orbits, the irregularaties produced are so slowly operated in contracting, dilating, and inclining those orbits, that the system may go on for many thousand years before any extraordinary interference becomes necessary in order to correct it." And Dr. Burnett adds, that "those small irregularities cast no discredit on the good contrivance

of the whole." Nothing, however, could cast greater discredit if it were as he supposed, and as all men previous to the late discoveries supposed; it was only, they rather think, a "small irregularity," which was every hour tending to the destruction of the whole system, and which must have deranged or confounded its whole structure long before it destroyed it. Yet now we see that the wisdom, to which a thousand years are as one day, not satisfied with constructing a fabric which might last for "many thousand years without His interference," has so formed it that it may thus endure for ever.

Now if such be the grounds of our belief in the universal prevalence of Design, and such the different lights which at different periods of our progress in science we possess upon this branch of the divine government; if we undoubtingly believe that contrivance is universal only because we can trace and comprehend it in a great majority of instances, and if the number of exceptions to the rule is occasionally diminished as our knowledge of the particulars is from time to time extended—may we not apply the same principle to the apprehension of Benevolent purpose, and infer from the number of instances in which we plainly perceive a good intention, that if we were better acquainted with those cases in which a contrary intention is now apparent, we should there too find the generally pervading character of Benevolence to prevail? Not only is this the manner in which we reason respecting the Design of the Creator from examining his works; it is the manner in which we treat the conduct of our fellow creatures. A man of the most extensive benevolence and strictest integrety in his general deportment has done something equivocal; nay, something apparently harsh and cruel; we are slow to condemn him; we give him credit for acting with a good motive and for a righteous purpose; we rest satisfied that "if we only knew everything he would come out blameless." This arises from a just and a sound view of human character, and its general consistency with itself. The same reasoning may surely be applied with all humility and reverence, to the works and the intentions of the great Being who has implanted in our minds the principles which lead to that just and sound view of the deeds and motives of men.

But let the argument be rested upon our course of reasoning respecting divine contrivance. The existence of Evil is in no case more apparent than the existence of Disorder seems to be in many things. To go no further than the last example which has been given—the mathematician could perceive the derangement in the planetary orbits, could demonstrate that it must ensue from the mutual action of the heavenly bodies on each other, could calculate its progress with the utmost exactnes, could tell with all nicety how much it would alter the forms of the orbits in a given time, could foresee the time when the whole system must be irretrievably destroyed by its operations as a mathematicial certainty. Nothing that we call evil can be much more certainly perceived than this derangement, of itself an evil, certainly a great imperfection, if the system was observed by the mind of man as we regard human works. Yet we now find, from well considering some things which had escaped attention, that the system is absolutely free from derangement; that all the disturbances counterbalance each other; and that the orbits never can either be flattened or bulged out beyond a definite or very inconsiderable quantity. Can any one doubt that there is also a reason for even the small and limited, this regular and temporary derangement? Why it exists at all, or in any the least degree, we as yet know not. But who will presume to doubt that it has a reason which would at once satisfy our minds were it known to us? Nay, who will affirm that the discovery of it may not yet be in reserve for some later, and happier age? Then are we not entitled to apply the same reasoning to what at present appears Evil in a system of which after all we know of it, so much still remains concealed from our view?

The mere act of creation in a Being of wisdom so admirable and power so vast, seems to make it extremely probable that perfect goodness accompanies the exertion of his perfect skill. There is something so repugnant to all our feelings, but also to all the conceptions of our reason, is the supposition of such a Being desiring the misery, for its own sake, of the Beings whom he voluntary called into existence and endowed with a sentient nature, that the mind naturally and irresistibly recoils from such a thought. But this is not all. If the nature of that great Being were evil, his power being unbounded there would be some proportion between the amounts of ills and the monuments of that power. Yet we are struck dumb with the immensity of His works to which no imperfection can be ascribed, and in which no evil can be traced, while the amount of mischief that we see might sink into a most insignificant space; and is such as a being of inconsiderable power and very limited skill could easily have accomplished. This is not the same consideration with the balance of good against evil; and enquirers do not seem to have sufficiently attented to it. The argument, however, deserves much attention, for

it is purely and strictly inductive. The divine nature is shown to be clothed with prodigious power and incomparable wisdom and skill,—power and skill so vast and so exceeding our comprehension that we ordinarily term them infinite, and are only inclined to conceive the possibility of limiting, by the course of the argument upon evil, one alternative of which is assumed to raise an exception. But admitting on account of the question, under discussion that we have only a right to say that power and skill are prodigiously great, though possibly not boundless, they are plainly shown in the phenomena of the universe to be the attributes of a Being, who, if evil-disposed, could have made the monuments of Ill upon a scale resembling those of Power and Skill; so that if those things which seem to us evil be really the result of a mischievous design in such a Being, we cannot comprehend why they are upon so entirely different a scale. This is a strong presumption from the facts that we are wrong in imputing those appearances to such a disposition. If so, what seems evil must needs be capable of some other explanation consistent with divine goodness—that is to say, would not prove to be evil at all if we knew the whole of those facts.

But it is necessary to proceed a step further, especially with a view to the fundamental position now contended for, the extending to the question of Benevolence the same principles which we apply to that of Intelligence. The evil which exists, or that which we suppose to be evil, not only is of a kind and a magnitude requiring inconceivably less power and less skill than the admitted good of the creation—it also bears a very small proportion in amount; quite as small a proportion as the cases of unknown or undiscoverable design bear to those of acknowledged and proved contrivance. Generally speaking, the preservation and the happiness of sensitive creatures appears to be the great object of creative exertion and conservative providence. The expanding of our faculties, both bodily and mental, is accompanied with pleasure; the exercise of those powers is almost always attended with gratification; all labour so acts as to make rest peculiarly delicious; much of labour is enjoyment; the gratification of those appetites by which both the individual is preserved and the race is continued, is highly pleasurable to all animals; and it must be observed that instead of being attracted by grateful sensations to do anything requisite for our good or even our existence, we might have been just as certainly urged by the feeling of pain, or the dread of it, which is a kind of suffering in itself. Nature, then, resembles the lawgiver who, to make his subjects obey, should prefer holding out rewards for compliance with his commands rather than denounce punishments for disobedience. But nature is yet more kind; she is gratuitously kind; she not only prefers inducement to threat or compulsion, but she adds more gratification than was necessary to make us obey her calls. How well might all creation have existed and been continued, though the air had not been balmy in spring, or the shade and the spring refreshing in summer; had the earth not been enamelled with flowers, and the air scented with perfumes! How needless for the propagation of plants was it that the seed should be enveloped in fruits the most savoury to our palate, and if those fruits serve some other purpose, how foreign to that purpose was the formation of our nerves so framed as to be soothed or excited by their flavour! We here perceive design, because we trace adaptation. But we at the same time perceive benevolent design, because we perceive gratuitous and supererogatory enjoyment bestowed. Thus, too, see the care with which animals of all kinds are tended from their birth. The mother's instinct is not more certainly the means of securing and providing for her young, than her gratification in the act of maternal care is great and is also needless for making her perform that duty. The grove is not made vocal during pairing and incubation, in order to secure the laying or the hatching of eggs; for if it were as still as the grave, or were filled with the most discordant croaking, the process would be as well performed. So, too, mark the care with which injuries are remedied by what has been correctly called the *vis medicatrix*. Is a muscle injured?—Suppuration takes place, the process of granulation succeeds, and new flesh is formed to supply the gap, or if that is less wide, a more simple healing process knits together the severed parts. Is a bone injured?—A process commences by which an extraordinary secretion of bony matter takes place, and the void is supplied. Nay, the irreparable injury of a joint gives rise to the formation of a new hinge, by which the same functions may be not inconveniently, though less perfectly, performed. Thus, too, recovery of vigour after sickness is provided for by increased appetite; but there is here superadded, generally, a feeling of comfort and lightness, an enjoyment of existence so delightful, that it is a common remark how nearly this compensates the sufferings of the illness. In the economy of the mind it is the same thing. All our exertions are stimulated by curiosity, and the gratification is extreme of satisfying it. But it might have been otherwise ordered, and some painful feeling

might have been made the only stimulant to the acquisition of knowledge. So, the charm of novelty is proverbial; but it might have been the unceasing cause of the most painful alarms. Habit renders every thing easy; but the repetition might have only increased the annoyance. The loss of one organ makes the others more acute. But the partial injury might have caused, as it were, a general paralysis. 'Tis thus that Paley is well justified in exclaiming, "It is a happy world after all!" The pains and the sufferings, bodily and mental, to which we are exposed, if they do not sink into nothing, at least retreat within comparatively narrow bounds; the ills are hardly seen when we survey the great and splendid picture of worldly enjoyment or ease.

But the existence of considerable misery is undeniable: and the question is, of course confined to that. Its exaggeration, in the ordinary estimate both of the vulgar and of sceptical reasoners, is equally certain Paley, Bishop Sumner, as well as Derham, King, Ray and others of the older writers, have made many judicious and generally correct observations upon its amount, and they, as well as some of the able and learned authors of the Bridgwater Treatises, have done much in establishing deductions necessary to be made, in order that we may arrive at the true amount. That many things, apparently unmixed evils, when examined more narrowly, prove to be partially beneficial, is the fair result of their well-meant labours; and this, although anything rather than a proof that there is no evil at all, yet is valuable as still further proving the analogy between this branch of the argument and that upon design; and in giving hopes that all may possibly be found hereafter to be good, as everything will assuredly be found to be contrived with an intelligent and useful purpose. It may be right to add a remark or two upon some evils, and those of the greatest magnitude in the common estimate of human happiness, with a view of further illustrating this part of the subject.

Mere imperfection must altogether be deducted from the account. It never can be contended that any evil nature can be ascribed to the first cause, merely for not having endowed sentient creatures with greater power or wisdom, for not having increased and multiplied the sources of enjoyment, or for not having made those pleasures which we have more exquisitely grateful. No one can be so foolish as to argue that the Deity is either limited in power, or deficient in goodness, because he has chosen to create some beings of a less perfect order than others. The mere negation in the creating of some, indeed of meny, nay of any conceivable number of desirable attributes, is therefore no proper evidence of evil design or of limited power in the Creator—it is no proof of the existence of evil properly so called. But does not this also erase death from the catalogue of ills? It might well please the Deity to create a mortal being which, consisting of soul and body, was only to live upon this earth for a limited number of years. If, when that time has expired, this being is removed to another and a superior state of existence, no evil whatever accrues to it from the change; and all views of the government af this world lead to the important and consolitary concluson, that such is the design of the Creator; that he cannot have bestowed on us minds capable of such expansion and culture only to be extinguished when they have reached their highest pitch of improvement; or if this be considered as begging the question by assuming benevolent design, we cannot easily conceive that while the mind's force is so little affected by the body's decay, the destruction or dissolution of the latter should be the extinction of the former. But that death operates as an evil of the very highest kind in two ways is obvious; the dread of it often embitters life, and the death of friends brings to the mind by far its most painful infliction; certainly the greatest suffering it can undergo without any criminal consciousness of its own.

For this evil, then—this grievous and admitted evil—how shall we account? But first let us consider whether it be not unavoidable; not merely under the present dispensation, and in the existing state of things; for that is wholly irrelevant to the question which is raised upon the fitness of this very state of things; but whether it be not a necessary evil. That man might have been created immortal is not denied; but if it were the will of the Deity to form a limited being and to place him upon the earth for only a certain period of time, his death was the necessary consequence of this determination. Then as to the pain which one person's removal inflicts upon surviving parties, this seems the equally necessary consequence of their having affections. For if any being feels love towards another, this implies his desire that the intercourse with that other should continue; or what is the same thing, the repugnance and aversion to its crasing; that is, he must suffer affliction for that removal of the beloved object. To ceeate sentient beings devoid of all feelings of affection was no doubt possible to Omnipotence; but to endow those beings with such feelings as would give the constant gratification derived from the be-

nevolent affections, and yet to make them wholly indifferent to the loss of the objects of those affections, was not possible even for Omnipotence; because it was a contradiction in terms, equivalent to making a thing both exist and not exist at one and the same time. Would there have been any considerable happiness in a life stripped of these kindly affections? We cannot affirm that there would not, because we are ignorant what other enjoyments might have been substituted for the indulgence of them. But neither can we affirm that any such substitution could have been found; and it lies upon those who deny the necessary connection between the human mind, or any sentient being's mind, and grief for the loss of friends, to show that there are other enjoyments which could furnish an equivalent to the gratification derived from the benevolent feelings. The question then reduces itself to this: Wherefore did a being, who could have made sentient beings immortal, choose to make them mortal? or, Wherefore has he placed man upon the earth for a time only? or, Wherefore has he set bounds to the powers and capacities which he has been pleased to bestow upon his creature? and this is a question which we certainly never shall be able to solve; but a question extremely different from the one more usually put—How happens it that a good being has made a world full of misery and death?

In the necessary ignorance wherein we are of the whole designs of the Deity, we cannot wonder if some things, nay if many things, are to our faculties inscrutable. But we assuredly have no right to say that those difficulties which try and vex us are incapable of a solution, any more than we have to say, that those cases in which as yet we can see no trace of design, are not equally the result of intelligence, and equally conducive to a fixed and useful purpose with those in which we have been able to perceive the whole, or nearly the whole scheme. Great as have been our achievements in physical astronomy, we are as yet wholly unable to understand why a power pervades the system acting inversely as the squares of the distance from the point to which it attracts, rather than a power acting according to any other law; and why it has been the pleasure of the almighty Architect of that universe, that the orbits of the planets should be nearly circular instead of approaching to, or being exactly the same with many other trajectories of a nearly similar form, though of other properties; nay, instead of being curves of a wholly different class and shape. Yet we never doubt that there was a reason for this choice; nay, we fancy it possible that even on earth we may hereafter understand it more clearly than we now do: and never question that in another state of being we may be permitted to enjoy the contemplation of it. Why should we doubt that, at least in that higher state, we may also be enabled to perceive such an arrangement as shall make evil wholly disappear from our present system, by showing us that it was necessary and inevitable, even in the works of the Deity; or, which is the same thing, that its existence conduces to such a degree of perfection and of happiness upon the whole, as could not, even by Omnipotence, be attained without it; or, which is also the same thing, that the whole creation as it exists, taking both worlds together, is perfect, and incapable of being in any particular changed without being made worse and less perfect?

Taking both worlds together—For certainly were our views limited to the present sublunary state, we may well affirm that no solution whatever could even be imagined of the difficulty—if we are never again to live; if those we here loved are for ever lost to us; if our faculties can receive no further expansion; if our mental powers are only trained and improved to be extinguished at their acme—then indeed are we reduced to the melancholy and gloomy dilemma of the Epicureans; and evil is confessed to checker, nay almost to cloud over our whole lot, without the possibility of comprehending why, or of reconciling its existence with the supposition of a providence at once powerful and good. But this inference is also an additional argument for a future state, when we couple it with those other conclusions respecting the economy of the world to which we are led by wholly different routes, when we investigate the phenomena around us and within us.

Suppose, for example, it should be found that there are certain purposes which can in no way whatever—no conceivable way—be answered except by placing man in a state of trial or probation; suppose the essential nature of mind shall be found to be such that it could not in any way whatever exist so as to be capable of the greatest purity and improvement—in other words, the highest perfection—without having undergone a probation; or suppose it should be found impossible to communicate certain enjoyments to rational and sentient beings without having previously subjected them to certain trials and certain sufferings—as for instance, the pleasures derived from a consciousness of perfect security, the certainty that we can suffer and perish no more—this surely is a possible supposition. Now, to continue the last example—Whatever pleasure there is in the contrast between

ease and previous vexation or pain, whatever enjoyment we derive from the feeling of absolute security after the vexation and uncertainty of a precarious state, implies a previous suffering—a previous state of precarious enjoyment; and not only implies it but necessary implies it, so that the power of Omnipotence itself could not convey to us the enjoyment without having given us the previous suffering. Then is it not possible that the object of an all powerful and perfectly benevolent being should be to create like beings, to whom as entire happiness, as complete and perfect enjoyment, should be given as any created beings—that is, any being, except the Creator himself—can by possibility enjoy? This is certainly not only a very possible supposition, but it appears to be quite consistent with, if it be not a necessary consequence of, his being perfectly good as well as powerful and wise. Now we have shown, therefore, that such being supposed the design of Providence, even Omnipotence itself could not accomplish this design, as far as one great and important class of enjoyments is concerned, without the previous existence of some pain, some misery. Whatever gratification arises from relief—from contrast—from security succeeding anxiety—from restoration of lost affections—from renewing severed connections—and many others of a like kind, could not by any possibility be enjoyed unless the correlative suffering had first been undergone. Nor will the argument be at all impeached by observing, that one Being may be made to feel the pleasure of ease and security by seeing others subjected to suffering and distress; for that assumes the infliction of misery on those others; it is "*alterius* spectare laborem" that we are supposing to be sweet; and this is still partial evil.

As the whole argument respecting evil must, from the nature of the question, resolve itself into either a proof of some absolute or mathemathical necessity not to be removed by infinite power, or the showing that some such proof may be possible although we have not yet discovered it, an illustration may naturally be expected to be attainable from mathemathical considerations. Thus we have already adverted to the law of periodical irregularities in the solar system. Any one before it was discovered seemed entitled to expatiate upon the operation of the disturbing forces arising from mutual attraction, and to charge the system arranged upon the principle of universal gravitation with want of skill, nay, with leading to inevitable mischief—mischief or evil of so prodigious an extent as to exceed incalculably all the instances of evil and of suffering which we see around us in this single planet. Nevertheless what then appeared so clearly to be a defect and an evil, is now well known to be the very absolute perfection of the whole heavenly architecture.

Again, we may derive a similar illustration from a much more limited instance, but one immediately connected with sirict mathematical reasoning, and founded altogether in the nature of necessary truth. The proplem has been solved by mathematicians, Sir Isaac Newton having first investigated it, of finding the form of a symmetrical solid, or solid of revolution, which in moving through a fluid shall experience the least possible resistance; in other words, of finding the form that must be impressed upon any given bulk of matter, so that it shall move more easily through a surrounding fluid than if it had any other conceivable form whatever, with a breadth or a length also given. The figure bears a striking resemblance to that of a fish. Now suppose a fish were formed exactly in this shape, and that some animal endowed with reason were placed upon a portion of its surface, and able to trace its form for only a limited extent, say at the narrow part, where the broad portion or end of the moving body was opposed, or seemed as if it were opposed, to the surrounding fluid when the fish moved—the reasoner would at once conclude that the contrivance of the fish's form was very inconvenient and inartificial, and that nothing could be much worse adapted for expeditious or easy movement through the waters. Yet it is certain that upon being afterwards permitted to view THE WHOLE body of the fish, what had seemed a defect and an evil, not only would appear plainly to be none at all, but it would appear manifest that this seeming evil or defect was a part of the most perfect and exeellent structure, which it was possible even for Omnipotence and Omniscience to have adopted, and that no other conceivable arrangement could by possibility have produced so much advantage, or tended so much to fulfil the design in view. Previous to being enlightened by such an enlarged view of the whole facts, it would thus be a rash and unphilosophical thing in the reasoner whose existence we are supposing to pronounce an unfavourable opinion. Still more unwise would it be if numerous other observations had evinced traces of skill and goodness in the fish's structure. The true and the safe conclusion would be to suspend an opinion which could only be unsatisfactorily formed upon imperfect data; and to rest in the humble hope and belief that one day all would appear for the best.

THE RESURRECTION.

Whether Jesus Chsist came to life again after he was killed, and, even if he did, whether it necessarily follows that all other persons will be re-animated? is a subject worthy of consideration. Let those who think it improper to call this in question recollect, that we are enjoined to "Prove all things, and hold fast that only which is true." We will, therefore, put this doctrine to the proof.

Some persons have disbelieved the existence of such a person as Jesus Christ—we are not amongst that number; we have as good testimony of his existence, as we have of several other heroes of antiquity; but it by no means follows, that if we believe the existence of Hercules, we are to give credit to all to marvels attributed to Hercules. If we believe the existence of Romulus, we do not, therefore, believe that his father was the God Mars, and his mother the vestal virgin, Rhea Sylvia; nor, if we believe in the existence of Jesus Christ, need we necessarily give credit to all the marvels related of him; amongst others that his father was a God and his mother was a Virgin; or that he either came into the world, or went out of the world, in any but by the ordinary processes. We all know that children at an early age are prone to believe the most wild, and contradictory, and improbable narrations, they delight in the marvellous; and so, in the early ages of the world, mankind have been prone to believe the most incongruous and inconsistent narrations. There is no ancient history which does not abound with marvels, and prodigies, and monstrosities, which the intelligent reader at once discards, on the ground of their improbability.

The accounts which are given of the miraculous entrance and miraculous exit of this miraculous personage, Jesus Christ, are presented to us in what are called the Books of the four Evangelists. There were upwards of forty biographical accounts of Jesus Christ published, and some years since an assembly of divines was held, when they put it to the vote which of these biographical accounts where to be considered canonical; they decided by a majority of votes that the four which bear the names of Matthew, Mark, Luke, and John, should be considered as given by inspiration, and that the others should be laid aside. Whether the divines who so voted claim to be inspired also, is not stated; and, if they were not inspired, we lay claim to the same right of judging for ourselves which they exercised.

Assuming, then, that the four books, called the Gospels, were written by the persons whose names are attached to them, they must have written of that which they saw, or that which they heard, or that of which they received information by some supernatural means. They did not *see* the resurrection,—they don't profess to have seen it—they were not present. Then, had they supernatural information about it? and, if they had, how do we know it? If the Holy Ghost had whispered in their ear what they should write, or had directed whilst they were writing, the Holy Ghost would have given the same directions to one Evangelist as to another; whereas, there are discrepancies in the statements which are inexplicable, upon the supposition of there being heavenly accounts. The Holy Ghost must have revealed to Matthew that there was an earthquake, and concealed it from the others, for the others do not mention it. The Holy Ghost must have told Matthew that an angel descended from heaven and rolled away the stone; this he does not seem to have told the other Evangelists. Mark speaks of a young man in a white garment—whether a shirt or a surplice he does not state—perhaps this young man was the angel. Whether the young man came down from heaven in the surplice, or whether he put it on when he arrived on earth is not stated. We did not know they wore surplices in heaven, or that it was a manufacturing country. Luke says there were *two* men in shining garments. These and other discrepancies which, if the reader will examine for himself, he will find, must satisfy the unbiassed that the writers did not all receive their accounts from the Holy Ghost; they must, then, have written on hearsay evidence. We all know how difficult it is, even in this day, to obtain a correct account of any event which occurs in a country where we have the advantage of good roads, the printing-press, and a people far more advanced in civilization than they were in that day. Are we, then, to place implicit credence in the hearsay evidence of parties who do not pretend to have written the accounts until thirty or forty years after they took place, in an obscure province, where there were no roads, no printing press, where scarcely any could read or write, before even writing paper was invented, and when the inhabitants were grossly ignorant?

If Jesus Christ was crucified—which we think probable, seeing how anxious the

bigots have always been to persecute reformers, especially those who attack religion—it by no means necessarily follows that he was killed. To drive nails through the hands and the feet would not cause death; indeed, the usual mode was to break the legs of the suffers to accellerate death. In the case of Jesus Christ, special mention is made that they did not break his legs, having found him dead: he might have fainted from exhaustion and suffering, and have appeared dead. It is said they stuck a spear in his side, but there have been men with fifteen sabre wounds, left for dead on the field of battle, who have recovered, and these are never brought forward as proofs of resurrection. It appears to us, then, that the fact of the death of Christ is not so strongly made out as so important a fact, on which is said to hinge the salvation of mankind, ought to have been made out: and, although we incline to the opinion that he was killed, and that the account of his having been seen after death was imagination or exaggeration, yet, if there was any credible evidence that he was seen after death, we should consider it unlikely he had ever been killed.

Some women in the night or early in the morning, go the tomb and see an angel; the report of this spreads, and they have seen two angels. One of the women seems to have been a mad woman. It is recorded in Mark, that out of Mary Magdalen, Jesus Christ had cast seven devils—why, she might have an eighth, and be under the influence of it at that time. The reader will observe that Mark says, when she told the disciples she had seen Jesus, they did not believe her; she was a woman not to be believed by those who heard her with their own ears; why, then, should we believe her? In Matthew it is stated that the eleven disciples saw him on a mountain, but *some doubted.* Even his contemporaries, those who are said to have seen him, did not believe they saw him. All the accounts of his having been seen are vague and contradictory, nothing like the sort of evidence that would be received in a court of justice in the present day, to establish the simplest fact, much less can it be taken on an affair so improbable. Mark says he appeared in another form to some of them, who told it and were *not believed.* Luke says he appeared to two of them as they went to Emmaus, but *their eyes were holden* that they should not know him: the evidence of what a man saw when he was blindfold is not very strong. Mark says after he had spoken to them, he went up to heaven and sitteth on the right hand of God. At a period when it was believed that the earth was as flat as a pancake, that heaven was up aloft, and hell underground, and that gods and goddesses had hands, and arms, and legs, it might be all very well to speak of going up to heaven and shaking hands with the presiding deity of Olympus, or of sitting at the right hand; but really to tell us Anno Domini, 1845, that we are to believe this, is too bad. According to John, the fishermen caught a great many fish one night, and that was considered evidence that the Lord was amongst them. It was stated that he was seen by five hundred at one time, as if that must settle the question; but the person who reported this might as well have said five thousand. We have no direct conclusive satisfactory evidence that he was seen by any one. It is a world of spirits—the testimony of those who have seen the ghosts of the departed, is always received with suspicion, and, whenever traced to the origin, has been found to be caused by a heated imagination.

To shew the sort of exaggeration in which the statements abound, the Evangelist, John, sums it all up in his last verse, that during the forty days Jesus Christ was on the earth, after the resurrection, he performed so many things, that, if they were written, the world would not be large enough to contain all the books!! There is positively no contending against such gigantic arguments—that closes the book, and verily it is a closer!!

There is one circumstance mentioned by Gibbon, in his Roman History, which is this—that the crucifixion is said to have been accompanied by earthquakes, and prodigious darkness over the whole land, whereas Pliny and Seneca, who were contemporaries, both philosophers and men of science, and who kept a very minute record of all the natural phenomena of that day—eclipses, earthquakes, &c.—make no mention of those related by Matthew and Co. The Roman Government had emissaries in all the provinces, and communications were kept up with the capital; such striking occurrences could not have failed to have been recorded by them had they really happened.

If, in the present day, a very miraculous occurrence were said to have taken place in England, but all the Englishmen denied the truth of it, we should think their testimony carried some weight with it; yet the affair of the resurrection is reported to have taken place in Judea, the land of the Jews, and all the Jews said, and still say, it is false.

The doctrine of the resurrection is hard to reconcile, not only with science and philosophy, but with the prevalent doctrine of the immateriality of the soul. Science

shows that the component parts of a human being when decomposed go to form other bodies, animate and inanimate, and every other human being, and do not lie dormant waiting for the sound of the trumpet. A sailor who loses an arm in the Baltic, a leg in the German Ocean, and is ultimately buried in the Pacific, becomes the food of sharks and monsters of the deep; it requires really a strong imagination to fancy these stray limbs whizzing through the air to join the trunk on the morning of the resurrection, and the calling together the component parts of the trunk, but then say the pious, "all things are possible." We should like to have their opinion, moreover, on the case of a child having a leg taken off at the age of three or five years, and afterwards living to be a man, whether the resurrection will take place of the wooden leg or of the infant leg, and, if of the latter, how it is to fit the other parts of the body? but "all things are possible." According to the doctrine of the immateriality of the soul, a resurrection is perfectly unnecessary; for if the body is merely the clay tenement of the soul, which at death wings its way to realms of everlasting bliss or endless torments, what object is answered by calling the souls back from their destination to be again imprisoned in the clay tenement. If the object is that they may be present at the Great Assizes, which they call the Day of Judgment, it appears rather contradictory to call them up for trial and to pass sentence, having been punished or rewarded before trial. To hang first and try afterwards is a refinement in judicial affairs.

AGONY OF JESUS.

The narratives of the synoptics are not concordant. According to Matthew and Mark, Jesus commanding the other disciples to remain some distance behind, took with him his three most intimate disciples, Peter and the two sons of Zebedee; he was full of anxiety and hesitation; he declared to the three that he was sorrowful even unto death; and, exhorting them to watchfulness, he separated also from them, in order to pray by himself; in this prayer, with his head bowed to the earth, he begs that this cup of suffering may pass from him, submitting himself, nevertheless to the will of his Father. On returning to his disciples he found them asleep, and exhorted them again to watchfulness—he left them once more, repeated his former prayer, and again returning, found them once more asleep. For the third time he left them to renew his prayer, and returning for the third time, he found them still asleep; but on this occasion he awakened them to meet the traitor, who was approaching. Luke says not a word respecting the two numbers three which figure in the narrative of the two first evangelists; but, according to him, Jesus, after having exhorted his disciples to prayer, withdrew from them to about the distance of a stone's cast; he is represented to have prayed once only, but almost in the same terms as those attributed to him in the two first gospels; after which he returned to his disciples, and awakened them, as Judas was approaching, with those who were to apprehend him. In place of the three prayers, Luke, in the only scene of prayer of which he speaks, has introduced two circumstances which were not known to the former writers, namely, that during the prayer, immediately before the commencement of the extreme agony an angel appeared unto Jesus, to strengthen him, and that during the "agony," Jesus sweat great drops of sweat resembling blood, which fell upon the ground.

This scene of Gethesmane has, in every age, led to recriminatory remarks, because Jesus appeared to have exhibited a weakness, a fear of death, which may be looked upon as unbecoming. Celsus and Julian, recollecting doubtless the great model of an expiring Socrates, and other illustrious men among the heathen, laughed at the pusillanimity of Jesus in presence of death; Vinini audaciously placed his own conduct, as the time of his execution approached, above that of Jesus; and in the gospel of Nicodemus, Satan concludes from this scene that Christ was a mere mortal. This apocryphal gospel says, it is true, that the affliction of Jesus was only feigned, in order to embolden the devil to enter into a contest with him; but this is an evasion which only proves that the author of this book could not believe that Jesus really endured any affliction of this kind. The consequence of this scene is, that a distinction was made between the two natures of Christ; and the affliction, and the prayer that the "cup" might pass from him, have been attributed to his human nature, and the submission to the "will" of his father, to his divine nature. But, on the one hand, this appears to place in the being of Christ an inadmissable division; and, on the other hand, it does not appear very fitting that he should have trembled, even were it only in his human nature, before the corporeal sufferings which awaited him.—*Strauss' Life of Jesus.*

OF MATTER.

OF ITS VARIOUS COMBINATIONS; OF ITS DIVERSIFIED MOTION: OR OF THE COURSE OF NATURE.

We know nothing of the elements of bodies; but we know some of their properties or qualities; and we distinguish their various matter, by the effect or change produced on our senses; that is to say, by the variety of motion their presence excites in us. In consequence, we discover in them, extent, mobility, divisibility, solidity, gravity, and inert force. From these general and primitive properties, flow a number of others, such as density, figure, colour, ponderosity, &c. Thus, relatively to us, matter is all that affects our senses, in any manner whatever; the various properties we attribute to matter, by which we discriminate its diversity, are founded on the different impressions we receive, on the changes they produce in us.

A satisfactory definition of matter has not yet been given. Man, deceived and led astray by his prejudices, formed but vague, superficial, and imperfect notions concerning it. He looked upon it as an unique being, gross and passive, incapable of either moving by itself, of forming combinations, or of producing anything by its own energies. Instead of this unintelligible jargon he ought to have contemplated it as a *genus* of beings, of which the individuals, although they might possess some common properties, such as extent, divisibility, figure, &c., should not, however, be all ranked in the same class, nor comprised under the same general denomination.

An example will serve more fully to explain what we have asserted, throw its correctness into light, and facilitate the application. The properties common to all matter are, extent divisibility, impenetrability, figure, mobility, or the property of being moved in a mass. Fire, beside these general properties, common to all matter, enjoys also the peculiar property, of being put into activity by a motion, that produces on our organs of feeling the sensation of heat, and by another, that communicates to our visual organs the sensation of light. Iron, in common with matter in general, has extent and figure; is divisible, and moveable in mass: if fire be combined with it, in a certain proportion, the iron acquires two new properties, namely, those of exciting in us similar sensations of heat and light, which were excited by the element of fire, but which the iron had not, before its combination with the igneous matter. These distinguishing properties are inseparable from matter, and the phenomena that result, may, in the strictest sense of the word, be said to result necessarily.

If we contemplate, a little, the paths of nature; if for a time we trace the beings in this nature, under the different states through which, by reason of their properties, they are compelled to pass, we shall discover, that it is to motion, and motion only, that is to be ascribed all the changes, all the combinations, all the forms, in short, all the various modifications of matter. That it is by motion, everything that exists is produced, experiences change, expands, and is destroyed. It is motion that alters the aspect of beings, that adds to, or takes away from their properties; which obliges each of them, by a consequence of its nature, after having occupied a certain rank or order, to quit it, to occupy another; and to contribute to the generation, maintenance, and decomposition, of other beings, totally different in their bulk, rank, and essence.

In what experimental philosophers have styled the three orders of nature, that is to say, the *mineral*, the *vegetable*, and the *animal* worlds, they have established, by the aid of motion, a transmigration, an exchange a continual circulation in the particles of matter. Nature has occasion in one place, for those particles, which, for a time, she has placed in another. These particles, after having, by particular combinations: constituted beings, endued with peculiar essences, with specific properties, with determinate modes of action, dissolve and separate with more or less facility; and combining, in a new manner, they form new beings. The attentive observer sees this law execute itself in a manner, more or less prominent, through all the beings by which he is surrounded. He sees nature full of *erratic germe*, some of which expand themselves, whilst others wait until motion has placed them in their proper situation, in suitable wombs or matrices, in the necessary circumstances, to unfold, to increase, to render them more perceptible, by the addition of other substances, of matter analogous to their primitive being. in all this, we see nothing but the effect of motion, necessarily guided, modified, accelerated, or slackened, strengthened or weakened, by reason of the various properties that beings suc-

cessively acquire and lose; which, every moment, infallibly produces alterations, in bodies, more or less marked. Indeed these bodies cannot be, strictly speaking, the same, in any two successive moments of their existence; they must, every instant, either acquire or lose: in short, they are obliged to undergo continual variations in their essences, in their properties, in their energies, in their masses, in their qualities, in their mode of existence.

Animals, after they have been expanded in, and brought out of the wombs, that are suitable to the elements of their machine, enlarge, strengthen, acquire new properties, new energies, new faculties; either by deriving nourishment from plants, analogous to their being, or by devouring other animals, whose substance is suitable to their preservation; that is to say, to repair the continual deperdition or loss of some portion of their own substance, that is disengaging itself every instant. These same animals are nourished, preserved, strengthened and enlarged, by the aid of air, water, earth, and fire. Deprived of air, or of the fluid that surrounds them, that presses on them, that penetrates them, that gives them their elasticity, they presently cease to live. Water, combined with this air, enters into their whole mechanism, of which it facilitates the motion. Earth serves them for a basis, by giving solidity to their texture: it is conveyed by air and water, which carry it to those parts of the body with which it can combine. Fire, itself, disguised and enveloped under an infinity of forms continually received into the animal, procures him heat, continues him in life, renders him capable of exercising his functions. The aliments, charged with these various principles, entering into the stomach, re-establish the nervous system, and restore, by their activity and the elements which compose them, the machine which begins to languish, to be depressed, by the loss it has sustained. Forthwith the animal experiences a change, in his whole system; he has more energy, more activity; he feels more courage, displays more gaiety, he acts, he moves, he thinks, after a different manner; all his faculties are exercised with more ease. This igneous matter, so congenial to generation, so restorative in its effect, so necessary to life, was the Jupiter of the ancients: from all that has preceded, it is clear that what are called the elements, or primitive parts of matter, variously combined, are, by the agency of motion, continually united to, and assimilated with, the substance of animals; that they visibly modify their being, have an evident influence over their actions, that is to say, upon the motion they undergo, whether visible or concealed.

The same elements, which under certain circumstances serve to nourish, to strengthen, to maintain, the animal, become under others, the principles of his weakness, the instruments of his dissolution, of his death: they work his destruction, whenever they are not in that just proportion, which renders them proper to maintain his existence: thus, when water becomes too abundant in in the body of the animal, it enervates him, it relaxes the fibres, and impedes the necessary action, of the other elements: thus, fire admitted in excess, excites in him, disorderly motion, destructive of his machine: thus, air, charged with principles, not analogous to his mechanism, brings upon him, dangerous diseases and contagion. In fine, the aliments modified after certain modes, in the room of nourishing, destroy the animal, and conduce to his ruin: the animal is preserved no longer than these substances are analogous to his system. They ruin him when they want that just equilibrium, that renders them suitable to maintain his existence.

Plants, that serve to nourish and restore animals, are themselves nourished by earth; they expand on its bosom, enlarge, and strengthen, at its expence, continually receiving into their texture, by their roots and their pores, water, air, and igneous matter; water, visibly reanimates them, whenever their vegetation, or genus of life, languishes; it conveys to them, those analogous principles, by which they are enabled to reach perfection; air, is requisite to their expansion, and furnishes them with water, earth, and the igneous matter, with which it is charged. By these means, they receive more or less, of the inflammable matter; the different proportions of these principles, their numerous combinations, from whence result an infinity of properties, a variety of forms, constitute the various families and classes, into which botanists have distributed plants; it is thus we see the cedar, and the hyssop, develope their growth; the one, rises to the clouds, the other, creeps humbly on the earth. Thus, by degrees, from an acorn, springs the majestic oak, accumulating, with time, its numerous branches, and overshadowing us with its foliage. Thus, a grain of corn, after having drawn its own nourishment from the juices of the earth, serves, in its turn, for the nourishment of man, into whose system it conveys, the elements, or principles, by which it has been itself expanded; combined and modified, in such a manner, as to render this vegetable proper to assimilate and unite with the human frame; that is to say, with the fluids and solids, of which it is composed.

The same elements, the same principles, are found in the formation of minerals; as

well as in their decomposition, whether natural or artificial. We find, that earth diversely modified, wrought and combined, serves to increase their bulk and give them more or less, density and gravity. Air and water contribute to make their particles cohere: the igneous matter, or inflammable principle, tinges them with colour, and sometimes, plainly indicates its presence, by the brilliant scintillation, which motion elicits from them. These stones and metals, these bodies, so compact and solid, are disunited, are destroyed, by the agency of air, water and fire; which the most ordinary analysis is sufficient to prove, as well as a multitude of experience, to which our eyes are the daily evidence.

Animals, plants, and minerals, after a lapse of time, give back to nature; that is to say, to the general mass of things, to the universal magazine, the elements, or principles, which they have borrowed. The earth, retakes that portion of the body, of which it formed the basis, and the solidity; the air, charges itself with those parts, that are analogous to it, and with those particles which are light and subtle; water carries off, that which is suitable to liquescency; fire bursting its chains, disengages itself, and rushss into new combinations with other bodies.

The elementary particles of the animal, being thus dissolved, disunited, and dispersed; assume new activity, and form new combinations; thus, they serve to nourish, to preserve or destroy, new beings; among others, plants, which arrived at their maturity, nourish and preserve new animals; these in their turn, yielding to the same fate as the first.

Such is the constant, the invariable course of Nature; such is the eternal circle of mutation, which all that exists is obliged to describe. It is thus, motion generates, preserves for a time, and successively destroys, one part of the universe, by the other; whilst the sum of existence remains eternally the same. Nature, by its combinations produces suns, which place themselves in the centre of so many systems; she forms planets, which by their peculiar essence, graviate, and describe their revolutions round these suns: by degrees the motion is changed altogether, and becomes eccentric: perhaps, the day may arrive when these wondrous masses will disperse, of which man, in the short space of his existence, can only have a faint and transient glimpse.

It is clear then, that the continual motion, inherent in matter, changes and destroys all beings; every instant, depriving them of some of their properties, to substitue others: it is motion, which, in thus changing their actual essence, changes also their order, their direction, their tendency, and the laws, which regulate their mode of acting and being: from the stone formed, in the bowels of the earth, by the intimate combination, and close coherence of similar and analogous particles, to the sun, that vast reservoir of igneous particles, which sheds torrents of light, over the firmament; from the benumbed oyster, to the thoughtful, and active man; we see an interrupted progression, a perpetual chain of motion and combination, from which is produced, beings, that only differ from each other, by the variety of their elementary matter; by the numerous combinations of these elements, from whence spring modes of action and existence, diversified to infinity. In generation, in nutrition, in preservation, we see nothing more than matter, variously combined, of which each has its peculiar motion, regulated by fixed and determined laws, which oblige them to submit to necessary changes. We shall find, in the formation, in the growth, in the instantaneous life, of animals, vegetables and minerals, nothing but matter; which, combining, accumulating, aggregating, and expanding by degrees, forms beings, who are either feeling, living, vegetating, or else destitute of these faculties; which, having existed, some time under one particular form, are obliged to contribute by their ruin to the production of other forms.

Thus, to speak strictly, nothing in nature is either born, or dies, according to the common acceptation of those terms. This truth was felt, by many of the ancient philosophers. Plato tells us, that according to an old tradition, "the living were born of the dead, the same as the dead did come of the living; and, that this is the constant routine of nature." He adds from himself, "who knows, if to live, be not to die: and if to die, be not to live? This was the doctrine of Pythagoras, a man of great talent and no less note. Empedocles, says, "there is neither birth, nor death, for any mortal, but only a combination, and a separation, of that which was combined, and that this is what amongst men they call birth, and death." Again he remarks, "those are infants, or short sighted persons, with very contracted understandings, who imagine, any thing is born, which did not exist before, or that any thing can die or perish totally."

In the next number of the *Library of Reason* will be commenced "A History of the Earth and its Inhabitants, being an Abridgment of Vestiges of the Natural History of Creation."

Henry Hetherington, London.

THE LIBRARY OF REASON.

NATURAL HISTORY OF THE EARTH AND ITS INHABITANTS.

[AN ABRIDGMENT OF THE "VESTIGES OF THE NATURAL HISTORY OF CREATION."]

"There is always a new generation rising up to emancipate the world from the prejudices of the last (while originating new ones); and there are always a few disinterested, intrepid, contemplative spirits cultivating the calm wisdom, and bringing up the established convictions of the olden time, as material for the enthusiasm of the new, who may be relied on for maintaining the truth till they joyfully find that it has become too expansive for their keeping."—HARRIET MARTINEAU.

[THE "Vestiges of the Natural History of Creation" is crowded with facts of a very high order—some few the author's own experience, but the majority drawn from the writings of the most distinguished philosophers in the various departments of science. The reasoning is clear and calm—bold, but natural---modest and free from dogmatism. The style is perspicuous and elegant. The author convinces by his lucidity; favourably impresses by his fearless avowal of startling facts; and charms by the exceeding delicacy with which he advances his hypotheses. The book is the production of a master-mind, and the author, whoever he may be, must take rank amongst the greatest friends and reformers of his species. From many passages it is evident the writer is fully sensible of the danger which would attach to the publication of his name, and he wisely witholds it. The knowledge of his person would only furnish bigots with another victim, and perhaps deprive the world of an invaluable advocate of truth. If he will supply facts and arguments, there are plenty of good men and true who care nought for the anathemas and buffets of the interested, and who will disseminate the knowledge through the world. Their aim is identical with his, but their stake is less. There are so few of his class *now*, that we cannot afford to loose one of them---and presently, when there are more, there will be no danger.

In the "Vestiges" the author's aim is to develop and defend the hypothesis that plants and animals owe their existence to a favourable combination of circumstances at the time they made their first appearance upon the earth---as they now owe their the existence of conditions unfavourable to their continued enjoyment of life. He shows from geology that the plants and creatures found entombed in the various strata were peculiarly suited for the state of the earth at the time of their active existence. Also, that the states of the earth have been many, and that the differences in vegetable and animal forms are just as numerous; in fact, that the world never put on a new face but its creatures took new shapes. The author thinks that to imagine a deity created new animals and plants upon each occasion of a change in the earth, is to detract from his omnipotence---and he is of opinion that it is a much more worthy conception of an all-powerful being to suppose that when he created matter he endowed it with properties necessary for every contingency, and that his further attention or interference was, therefore, unnecessary. The author certainly shows it to be highly probable that plants and animals are the products of matter's action---but whether matter was created at some time and will be annihilated at some other time, or that it has ever been and ever will be the same in essence and quantity, though continually changing its forms, are questions which the reader must determine for himself, it not being our intention to offer any remarks either *pro* or *con*.

Philosophers are agreed upon the *rationale* of the origin of the earth, as also of the changes which have taken place upon its surface: astronomy has helped them to the one, and geology has materially assisted to establish the other. The question in dispute now, as it has been for ages, is---how came plants and animals upon the earth? Every particle of animate and inanimate organisms has been proved, by a thousand investigators, to be identical with the inorganic matter upon which they move and by which they are surrounded; physiologists out of number have established that the animal and the stone are subject to like conditions: they both live and grow, die and decay through the operation of matter's modes or laws. Animals cannot live without the presence of oxygen, and flame is extinguished by its absence; the cold that extracts the heat from the sod, also chills the animal; and the sun which draws the moisture from the porous earth, at the same time educes perspiration through the skin of man. Notwithstanding these and other general similitudes,

the great differences between organic and inorganic substances cannot be overlooked, and men have hesitated, nay, positively refused to consider plants and animals as natural productions: affirming it to be impossible for matter, simply in virtue of its inherent properties, to produce organisms,—though its power to produce crystals of uniform shape, and in endless variety and number was admitted. The hypothesis of the natural production of animals is still denied by our most celebrated philosophers, but it is not the more false on that account. The circulation of the blood was at one time scouted as absurd, and the discoveries of Galileo nearly brought him to the stake. The theory of the nebulous origin of our planetary system advanced for the first time in our own age, would, there is no doubt, a few years back have obtained for its promulgator an unenviable notoriety. Facts which once it would have been death to utter are now received with pleasure, and adopted with eagerness—so will it be, by-and-by, with the theory of the natural origin of plants and animals—and the "transmutation of species" will be classed amongst the facts of future ages.

We shall now introduce the "Vestiges" to the reader, premising that in those parts where we may deem it necessary for the economy of space to condense the author's arguments or facts, by using language of our own, we shall be very careful not to garble or pervert his meaning.]

The first chapter in the "Vestiges of the Natural History of Creation" is devoted to the "Bodies of Space, their arrangement and formation," in which the author enters into an astronomical investigation of the probable origin of the earth, the sun, and the planets. After stating some of the discoveries of modern astronomers, and particularly the nebular hypothesis of the two Herschels, he proceeds:—"If we could suppose a number of persons of various ages presented to the inspection of an intelligent being newly introduced into the world, we cannot doubt that he would soon become convinced that men had once been boys, that boys had once been infants, and, finally, that all had been brought into the world in exactly the same circumstances. Precisely thus, seeing in our astral system many thousands of worlds in all stages of formation, from the most rudimental to that immediately preceding the present condition of those we deem perfect, it is unavoidable to conclude that all the perfect have gone through the various stages which we see in the rudimental. This leads us at once to the conclusion that the whole of our firmament was at one time a diffused mass of nebulous matter, extending through the space which it still occupies. So also, of course, must have been the other astral systems. Indeed, we must presume the whole to have been originally in one connected mass, the astral systems being only the first division into parts, and solar systems the second (1). The first idea which all this impresses upon us is, that the formation of bodies in space is *still and at present in progress*. We live at a time when many have been formed, and many are still forming. Our own solar system is to be regarded as completed, supposing its perfection to consist in the formation of a series of planets, for there are mathematical reasons for concluding that Mercury is the nearest planet to the sun, which can, according to the laws of the system, exist. But there are other solar systems within our astral system, which are as yet in a less advanced state, and even some quantities of nebulous matter which have scarcely begun to advance beyond the stellar form. On the other hand, there are vast numbers of stars which have all the appearance of being fully formed systems, if we are to judge from the complete and definite appearance which they present to our vision through the telescope. We have no means of judging of the seniority of systems; but it is reasonable to suppose that, among the many, some are older than ours. There is, indeed, one piece of evidence for the probability of the comparative youth of our system, altogether apart from human traditions and the geognostic appearances of the surface of our planet. This consists in a thin nebulous matter, which is diffused round the sun to nearly the orbit of Mercury, of a very oblately spheroidal shape. This matter, which sometimes appears to our naked eyes, at sunset, in the the form of a cone projecting upwards in the line of the sun's path, and which bears the name of the zodiacal light, has been thought a residuum or last remnant of the concentrating matter of our system, and thus may be supposed to indicate the comparative recentness of the principal events of our cosmogony. Supposing the surmise and inference to be correct, and they may be held as so far supported by more familiar evidence, we might with the more confidence speak of our system as not amongst the elder born of heaven, but one whose various phenomena, physical and moral, as yet lay undeveloped, while myriads of others were fully fashioned and in complete arrangement. Thus in the sublime chronology to which we are directing our inquiries, we first find ourselves called upon to consider the globe which we inhabit as a child of the sun, elder than Venus

and her younger brother Mercury, but posterior in date of birth to Mars, Jupiter, Saturn, and Uranus; next to regard our whole system as probably of recent formation in comparison with many of the stars of our firmament. We must, however, be on our guard against supposing the earth as a recent globe in our ordinary conceptions of time. From evidence afterwards to be adduced, it will be seen that it cannot be presumed to be less than many hundreds of centuries old. How much older Uranus may be no one can tell, much less how more aged may be many of the stars of our firmament, or the stars of other firmaments than ours.....The nebular hypothesis almost necessarily supposes matter to have originally formed one mass. We have seen that the same physical laws preside over the whole. Are we also to presume that the constitution of the whole was uniform?—that is to say, that the whole consisted of similar elements. It seems difficult to avoid coming to this conclusion, at least under the qualification that, possibly, various bodies, under peculiar circumstances attending their formation, may contain elements which are wanting and lack some which are present in others, or that some may entirely consist of elements in which others are entirely deficient." From a consideration of the bodies of space and the constituent materials of the earth, the author passes to the formation of the world, and the era of the primary rocks, and remarks, "Geology tells us as plainly as possible, that the original crystalline mass was not a perfectly smooth ball, with air and water playing round it. There were vast irregularities in the surface—irregularities trifling perhaps compared with the whole bulk of the globe, but assuredly vast in comparison with any which now exist upon it." The earliest rocks in the secondary series containing organic remains are the limestone beds, and these consist only of "the unpretending forms of various zoophites and polypes, together with a few single and double-valved shell-fish (mollusks), all of them creatures of the sea." There are no vegetable remains found, though it is probable sea plants existed contemporaneously with the earliest animals, but of too slight a substance to leave any fossil trace. In the era of the old red sandstone "The forms of life which existed in the silurian are continued: we have the same orders of marine creatures, zoophyta.

"In this era, the forms of life which existed in the Silurian are continued: we have the same orders of marine creatures, zoophyta, polypiaria, conchifera, crustacea; but to these are added numerous fishes, some of which are of most extraordinary and surprising forms. Several of the strata are crowded with remains of fish, showing that the seas in which those beds were deposited had swarmed with that class of inhabitants. The investigation of this system is recent; but already M. Agassiz has ascertained about twenty genera, and thrice the number of species. And it is remarkable that the Silurian fishes are here only represented in genera; the whole of the *species* of that era had already passed away. Even throughout the sub-groups of the system itself, the species are changed; and these are phenomena observed throughout all the subsequent systems or geological eras; apparently arguing that, during the deposition of all the rocks, a gradual change of physical conditions was constantly going on. A varying temperature, or even a varying depth of sea, would at present be attended with similar changes in marine life; and by analogy we are entitled to assume that such variations in the ancient seas might be amongst the causes of that constant change of genera and species in the inhabitants of those seas to which the organic contents of the rocks bear witness."

Of the character of some of the fishes of this era curious facts are mentioned. "It appears that in the imperfect condition of the vertebral column, and the inferior situation of the mouth in the pterichthys, coccosteus, &c., there is an analogy to the form of the dorsal cord and position of the mouth in the embryo of perfect fishes. The one-sided form of the tail in the osteolepis, &c., finds a similar analogy in the form of the tail in the embryo of the salmon. It is not premature to remark how broadly these facts seem to hint at as parity of law affecting the progress of general creation, and the progress of an individual fœtus of one of the more perfect animals." Fishes were very abundant during this era. Next followed the era of the carboniferous formation and of land, and the commencement of land plants. The animal remains of this era are by no means numerous, in comparison with those which go before, or those which come after. In the era of the new red sandstone, terrestrial zoology commences with reptiles, and we have the first traces of birds. "At Runcorn, near Manchester, and elsewhere, have been discovered the tracks of an animal which Mr. Owen calls the *rynchosaurus*, uniting with the body of a reptile the beak and feet of a bird, and which clearly had been a link between these two classes." Next follows the oolitic era, and the commencement of mammalia, the highest class of animals. The animals of the oolitic system are entirely different in species from those of the preceding age, and these species cease before the next.

"Land reptiles abounded, including species of the pterodactyle of the preceding age, tortoises, trionyces, crocodilians, and the pliosaurus, a creature which appears to have formed a link between the plesiosaurus and the crocodile. We know of at least six species of the flying saurian, the pterodactyle, in this formation." After the oolitic system succeeds the era of the cretaceous formation, then the era of the tertian formation, when mammalia were abundant; and, lastly, the era of the superficial formations, and the commencement of present species. "But even here there is no authentic or satisfactory instance of human remains being found, except in deposits obviously of very modern date; a tolerably strong proof that the creation of our own species is a comparatively recent event, and one posterior (generally speaking) to all the great natural transactions chronicled by geology."

The author next proceeds to "General Considerations on the *Origin* of the Animated Tribes," and as very much depends upon this chapter we shall quote it nearly entire. "If there is anything more than another impressed on our minds by the course of the geological history, it is, that the same laws and conditions of nature now apparent to us have existed throughout the whole time, though the operation of some of these laws may now be less conspicuous than in the early ages, from some of the conditions having come to a settlement and a close. That seas have flowed and ebbed, and winds disturbed their surfaces, in the time of the secondary rocks, we have proof on the yet preserved surfaces of the sands which constituted margins of the seas in those days. Even the fall of wind-slanted rain is evidenced on the same tablets. The washing down of detached matter from elevated grounds, which we see rivers constantly engaged in at the present time, and which is daily shallowing the seas adjacent to their mouths, only appears to have proceeded on a greater scale in earlier epochs. The volcanic subterranean force which we see belching forth lavas on the sides of mountains, and throwing up new elevations by land and sea, was only more powerfully operative in distant ages. To turn to organic nature, vegetation seems to have proceeded then exactly as now. The very alternations of the seasons has been read in unmistakable characters in sections of the trees of those days, precisely as it might be read in a section of a tree cut down yesterday. The system of prey amongst animals flourished throughout the whole of the pre-human period; and the adaptation of all plants and animals to their respective spheres of existence was as perfect in those early ages as it is still.

"But, as has been observed, the operation of the laws may be modified by conditions. At one early age, if there was any dry land at all, it was perhaps enveloped in an atmosphere unfit for the existence of terrestrial animals, and which had to go through some changes before that condition was altered. In the carbonigenous era, dry land seems to have consisted only of clusters of islands, and the temperature was much above what now obtains at the same places. Volcanic forces, and perhaps also the disintegrating power, seems to have been on the decrease since the first, or we have at least long enjoyed an exemption from such paroxysms of the former, as appear to have prevailed at the close of the coal formation in England and throughout the tertiary era. The surface has also undergone a gradual progress by which it has become always more and more variegated, and thereby fitted for the residence of a higher class of animals.

"In pursuing the progress of the development of both plants and animals upon the globe, we find an advance in both cases, along the line leading to the higher forms of organization. Amongst plants, we have first sea weeds, afterwards land plants; and amongst these the simpler (cellular and cryptogamic) before the more complex. In the department of zoology, we see zoophytes, radiata, mollusca, articulata, existing for ages before there were any higher forms. The first step forward gives fishes, the humblest class of the vertebrata; and, moreover, the earliest fishes partake of the character of the next lowest sub-kingdom, the articulata. Afterwards come land animals, of which the first are reptiles, universally allowed to be the type next in advance from fishes, and to be connected with these by the links of an insensible gradation. From reptiles we advance to birds, and thence to mammalia, which are commenced by marsupialia, acknowledgedly low forms in their class. That there is thus a progress of some kind, the most superficial glance at the geological history is sufficient to convince us. Indeed the doctrine of the gradation of animal forms has received a remarkable support from the discoveries of this science, as several types formerly wanting to a completion of the series have been found in a fossil state.

"It is scarcely less evident, from the geological record, that the progress of organic life has observed some correspondence with the progress of physical conditions on the surface. We do not know for certain that the sea, at the time when it supported radiated, molluscous, and articulated families, was incapable of supporting fishes; but causes for such a limitation are far from

inconceivable. The huge saurians appear to have been precisely adapted to the low muddy coasts and sea margins of the time when they flourished. Marsupials appear at the time when the surface was generally in that flat imperfectly variegated state in which we find Australia, the region where they now live in the greatest abundance, and one which has no higher native mammalian type. Finally, it was not till the land and sea had come into their present relations, and the former, in its principal continents, had acquired the irregularity of surface necessary for man, that man appeared. We have likewise seen reason for supposing that land animals could not have lived before the carbonigenous era, owing to the great charge of carbonic acid gas presumed to have been contained in the atmosphere down to that time. The surplus of this having gone, as M. Brogniart suggests, to form the vegetation, whose ruin became coal, and the air being thus brought to its present state, land animals immediately appeared. So also, sea-plants were at first the only specimens of vegetation, because there appears to have been no place where other plants could be produced or supported. Land vegetation followed, at first simple, afterwards complex, probably in conformity with an advance of the conditions required by the higher class of plants. In short, we see everywhere throughout the geological history, strong traces of a parallel advance of the physical conditions and the organic forms.

"In examining the fossils of the lower marine creation, with a reference to the kind of rock in connection with which they are found, it is observed that some strata are attended by a much greater abundance of both species and individuals than others. They abound most in calcareous rocks, which is precisely what might be expected, since lime is necessary for the formation of the shells of the mollusks and articulata, and the hard substance of the crinoidea and corals; next in the carboniferous series; next in the tertiary; next in the new red sand stone; next in slates; and lastly, least of all, in the primary rocks. This may have been the case without regard to the origination of new species, but more probably it was otherwise; or why, for instance, should the polypiferous zoophyta be found almost exclusively in the limestones? There are indeed abundant appearannces, as if, throughout all the changes of the surface, the various kinds of organic life invariably pressed in, immediately on the specially suitable conditions arising, so that no place which could support any form of organic being might be left for any length of time unoccupied. Nor is it less remarkable how various species are withdrawn from the earth, when the proper conditions for their particular existence are changed. The trilobite, of which fifty species existed during the earlier formations, was extirpated before the secondary had commenced, and appeared no more. The ammonite does not appear above the chalk. The species and even genera of all the early radiata and mollusks were exchanged for others long ago. Not one species of any creature which flourished before the tertiary (Ehrenberg's infusoria excepted) now exists; and of the mammalia which arose during that series, many forms are altogether gone, while of others we have now only kindred species. Thus to find not only frequent additions to the previously existing forms, but frequent withdrawals of forms which had apparently become inappropriate—a constant shifting as well as advance—is a fact calculated very forcibly to arrest attention.

"A candid consideration of all these circumstances can scarcely fail to introduce into our minds a somewhat different idea of organic creation from what has hitherto been generally entertained. That God created animated beings as well as the terraqueous theatre of their being, is a fact so powerfully evidenced, and so universally received, that I at once take it for granted. But in the particulars of this so highly supported idea, we surely here see cause for some re-consideration. It may now be inquired—in what way was the creation of animated beings effected? The ordinary notion may, I think, be not unjustly described as this—that the Almighty author produced the progenitors of all existing species by some sort of personal or immediate exertion. But how does this notion comport with what we have seen of the gradual advance of species, from the humblest to the highest? How can we suppose an immediate exertion of this creative power at one time to produce zoophytes, another time to add a few marine mollusks, another to bring in one or two conchifers, again to produce crustaceous fishes, again perfect fishes, and so on to the end? This would surely be to take a very mean view of the Creative Power—to, in short, anthropomorphize it, or reduce it to some such character as that borne by the ordinary proceedings of mankind. And yet this would be unavoidable; for that the organic creation was thus progressive through a long space of time, rests on evidence which nothing can overturn or gainsay. Some other idea must then be come to with regard to *the mode* in which the Divine Author proceeded in the organic creation. Let us seek in the history of the earth's formation

for a new suggestion on this point. We have seen powerful evidence, that the construction of this globe and its associates, and inferentially that of all the other globes of space, was the result, not of any immediate or personal exertion on the part of the Deity, but of natural laws which are expressions of his will. What is to hinder our supposing that the organic creation is also a result of natural laws, which are in like manner an expression of his will? More than this, the fact of the cosmical arrangements being an effect of natural law, is a powerful argument for the organic arrangements being so likewise, for how can we suppose that the august Being who brought all these countless worlds into form by the simple establishment of a nanatural principle flowing from his mind, was to interfere personally and specially on every occasion when a new shell-fish or reptile was to be ushered into existence on *one* of these worlds? Surely this idea is too ridiculous to be for a moment entertained (2).

"It will be objected that the ordinary conceptions of Christian nations on this subject are directly derived from Scripture, or, at least, are in conformity with it. If they were clearly and unequivocally supported by Scripture, it may readily be allowed that there would be a strong objection to the reception of any opposite hypothesis. But the fact is, however startling the present announcement of it may be, that the first chapter of the Mosaic record is not only not in harmony with the ordinary ideas of mankind respecting cosmical and organic creation, but is opposed to them, and only in accordance with the views here taken. When we carefully peruse it with awakened minds, we find that all the procedure is represented primarily and pre-eminently as flowing *from commands and expressions of will, not from direct acts.* Let there be light—let there be a firmament—let the dry land appear—let the earth bring forth grass, the herb, the tree—let the waters bring forth the moving creature that hath life—let the earth bring forth the living creature after his kind—these are the terms in which the principal acts are described. The additional expressions,—God made the firmament—God made the beast of the earth, &c. occur subordinately, and only in a few instances; they do not necessarily convey a different idea of the mode of creation, and indeed only appear as alternative phrases in the usual duplicative manner of Eastern narrative. Keeping this in view, the words used in a subsequent place, "God *formed* man in his own image," cannot well be understood as implying any more than what was implied before — namely, that man was produced in consequence of an expression of the Divine will to that effect. Thus, the scriptural objection quickly vanishes, and the prevalent ideas about the organic creation appear only as a mistaken inference from the text, formed at a time when man's ignorance prevented him from drawing therefrom a just conclusion. At the same time, I freely own that I do not think it right to adduce the Mosaic record, either in objection to, or support of any natural hypothesis, and this for many reasons, but particularly for this, that there is not the least appearance of an intention in that book to give philosophically exact views of nature.

"To a reasonable mind the Divine attributes must appear, not diminished or reduced in any way, by supposing a creation by law, but infinitely exalted. It is the narrowest of all views of the Deity, and characteristic of a humble class of intellects, to suppose him acting constantly in particular ways for particular occasions. It, for one thing, greatly detracts from his foresight, the most undeniable of all the attributes of Omnipotence. It lowers him towards the level of our humble intellects. Much more worthy of him it surely is, to suppose that all things have been commissioned by him from the first, though neither is he absent from a particle of the current of natural affairs in one sense, seeing that the whole system is continually supported by his providence. Even in human affairs, if I may be allowed to adopt a familiar illustration, there is a constant progress from specific action for particular occasions, to arrangements which, once established, shall continue to answer for a great multitude of occasions. Such plans the enlightened readily form for themselves and conceive as being adopted by all who have to attend to a multitude of affairs, while the ignorant suppose every act of the greatest public functionary to be the result of some special consideration and care on his part alone. Are we to suppose the Deity adopting plans which harmonize only with the modes of procedure of the less enlightened of our race? Those who would object to the hypothesis of a creation by the intervention of law, do not perhaps consider how powerful an argument in favour of the existence of God is lost by rejecting this doctrine. When all is seen to be the result of law, the idea of an almighty author becomes irresistible, for the creation of a law for an endless series of phenomena—an act of intelligence above all else that we can conceive — could have no other imaginable source, and tells, moreover, as powerfully for a sustaining as for an originating power.

On this point a remark of Dr. Buckland seems applicable: 'If the properties adopted by the elements at the moment of their creation adapted them beforehand to the infinity of complicated useful purposes which they have already answered, and may have still farther to answer, under many dispensations of the material world, such an aboriginal constitution, so far from superseding an intelligent agent, would only exalt our conceptions of the consummate skill and power that could comprehend such an infinity of future uses under future systems, in the original groundwork of his creation.'

"A late writer, in a work embracing a vast amount of miscellaneous knowledge but written in a dogmatic style, argues at great length for the doctrine of more immediate exertions on the part of the Deity in the works of his creation. One of the most striking of his illustrations is as follows:—'The coral polypi, united by a common animal bond, construct a defined form in stone; many kinds construct many forms. An allotted instinct may permit each polypus to construct its own cell, but there is no superintending one to direct the pattern, nor can the workers unite by consultation for such an end. There is no recipient for an instinct by which the pattern might be constructed. It is God alone, therefore, who is the architect; and for this end, consequently, he must dispose of every new polypus required to continue the pattern, in a new and peculiar position, which the animal could not have discovered by itself. Yet more, millions of these blind workers unite their works to form an island, which is also wrought out according to a constant general pattern, and of a very peculiar nature, though the separate coral works are numerously diverse. Still less, then, here as an instinct possible. The Great Architect himself must execute what he planned, in each case equally. He uses these little and senseless animals as hands; but they are hands which himself must direct. He must direct each one everywhere, and therefore he is ever acting.' This is a most notable example of a dangerous kind of reasoning. It is now believed that corals have a general life and sensation throughout the whole mass, residing in the nervous tissue which envelops them; consequently there is nothing more wonderful in their determinate general forms than in those of other animals.

"It may here be remarked that there is in our doctrine that harmony in all the associated phenomena which generally marks great truths. First, it agrees, as we have seen, with the idea of planet creation by natural law. Secondly, upon this supposition, all that geology tells us of the succession of species appears natural and intelligible. Organic life *presses in*, as has been remarked, wherever there was room and encouragement for it, the forms being always such as suited the circumstances, and in a certain relation to them, as, for example, where the limestone-forming seas produced an abundance of corals, crinoidea, and shell-fish. Admitting for a moment a re-origination of species after a cataclysm, as has been surmised by some geologist, though the hypothesis is always becomming less and less tenable, it harmonizes with nothing so well as the idea of a creation by law. The more solitary commencements of species, which would have been the most inconceivably paltry exercise for an immediately creative power, are sufficiently worthy of one operating by laws.

"It is also to be observed, that the thing to be accounted for is not merely the orgination of organic beings upon this little planet, third of a series which is but one of hundreds of thousands of series, the whole of which again form but one portion of an apparently infinite globe-peopled space, where all seems analogous. We have to suppose, that every one of these numberless globes is either a theatre of organic being, or in the way of becoming so. This is a conclusion which every addition to our knowledge makes only the more irresistible. It is conceivable, as a fitting mode of exercise for creative intelligence, that it should be constantly moving from one sphere to another, to form and plant the various species which may be required in each situation at particular times? Is such an idea accordant with our general conception of the dignity, not to speak of the power, of the Great Author? Yet such is the notion which we must form, if we adhere to the doctrine of special exercise. Let us see, on the other hand, how the doctrine of a creation by law agrees with this expanded view of the organic world."

"*Particular* considerations respecting the *Origin* of the Animated Tribes," follows the *general* considerations. The author commences with crystallization, which is declared to be "confessed by a phenomenon of inorganic matter; yet the simplest rustic observer is struck by the resemblance which the examples of it left upon a window by frost bear to vegetable forms. ..... Vegetable figures are also presented in some of the most ordinary appearances of the electric fluid. In the marks caused by positive electricity, or which it leaves in its passage, we see the ramifications of a tree, as well as of its individual leaves: those of the negative recal the bulbous or the spreading root, according as they are

clumped or divergent. These phenomena seem to say that the electric energies have had something to do in determining the forms of plants."

"Vegetable and animal bodies are mainly composed of the same four simple substances or elements—carbon, oxygen, hydrogen, and nitrogen. The first combinations of these in animals are into what are called proximate principles, as albumen, fibrin, urea, alantoin, &c., out of which the structure of the animal body is composed. Now the chemist, by the association of two parts oxygen, four hydrogen, two carbon, and two nitrogen, can *make urea*. Alantoin has also been produced artificially. Two of the proximate principles being realizable by human care, the posibility of realizing or forming all is established. Thus the chemist may be said to have it in his power to realize the first step in organization. Indeed, it is fully acknowledged by Dr. Daubeny, that in the combinations forming the proximate principles there is no chemical peculiarity. 'It is now certain,' he says, 'that the same simple laws of composition pervade the whole creation; and that, if the organic chemist only takes the requisite precautions to avoid resolving into their ultimate elements the proximate principles upon which he operates, the result of his analysis will shew that they are combined precisely according to the same plan as the elements of mineral bodies are known to be.' A particular fact is here worthy of attention. 'The conversion of fecula into sugar, as one of the ordinary processes of vegetable economy, is effected by the production of a secretion termed *diastose*, which occasions both the rupture of the starch vesicles, and the change of their contained gum into sugar. This diastose may be separately obtained by the chemist, and it acts as effectually in his laboratory as in the vegetable organization. He can also imitate its effects by other chemical agents.' The writer quoted below adds, 'No reasonable ground has yet been adduced for supposing that, if we had the power of bringing together the elements of any organic compound, in their requisite states and proportions, the result would be any other than that which is found in the living body.'

"It is much to know the elements out of which organic bodies are composed. It is something more to know their first combinations, and that these are simply chemical. How these combinations are associated in the structure of living bodies is the next inquiry, but it is one to which as yet no satisfactory answer can be given. The investigation of the minutiæ of organic structure by the microscope is of such recent origin, that its results cannot be expected to be very clear. Some facts, however, are worthy of attention with regard to the present inquiry. It is ascertained that the basis of all vegetable and animal substances consist of nucleated cells; that is, cells having granules within them. Nutriment is converted into these before being assimilated by the system. The tissues are formed from them. The ovum destined to become a new creature, is originally only a cell with a contained granuel. We see it acting this reproductive part in the simplest manner in the cryptogamic plants. 'The parent cell, arrived at maturity by the exercise of its organic functions, bursts, and liberates its contained granules. These, at once thrown upon their own resources, and entirely dependent for their own nutrition on the surrounding elements, develop themselves into new cells, which repeat the life of their original. Among the higher tribes of the cryptogamia, the reproductive cell does not burst, but the first cells of the new structure are developed within it, and these gradually extend, by a similar process of multiplication, into that primary leaf-like expansion which is the first formed structure in all plants.' *Here the little cell becomes directly a plant, the full formed living being* (3). It is also worthy of remark that, in the sponges, (an animal form,) a gemmule detached from the body of the parent, and trusting for sustentation only to the fluid into which it has been cast, becomes without further process, the new creature. Further, it has been recently discovered by means of the microscope, that there is, as far as can be judged, a perfect resemblance between the ovum of the mammal tribes, during that early stage when it is passing through the oviducts and the young of the infusory animalcules. One of the most remarkable of these, the *volvox globator*, has exactly the form of the germ which, after passing through a long fœtal progress, becomes a complete mammifer, an animal of the highest class. It has even been found that both are alike provided with those *cilia*, which, producing a revolving motion or its appearance, is partly the cause of the name given to this animalcule. These resemblances are the more entitled to notice, that they were made by various observers, distant from each other at the time. It has likewise been noted that the globules of the blood are reproduced by the expansion of contained granules; they are, in short, *distinct organisms multiplied by the same fissiparous generation*. So that all animated nature may be said to be based on this mode of origin; *the fundamental form of organic being is a globule, having a new globule form-*

ing within itself, by which it is in time discharged, and which is again followed by another and another, in endless succession. It is of course obvious that, if these globules could be produced by any process from inorganic elements, we should be entitled to say that the fact of a transit from the inorganic into the organic had been witnessed in that instance; the possibility of the commencement of animated creation by the ordinary laws of nature might be considered as established. Now it was given out some years ago by a French physiologist, that *globules could be produced in albumen by electricity*. If, therefore, these globules be identical with the cells which are now held to be reproductive, it might be said that the production of albumen by artificial means is the only step in the process wanting. This has not yet been effected; but it is known to be only a chemical process, the mode of which may be any day discovered in the laboratory, and two compounds perfectly co-ordinate, urea and alantoin, have actually been produced.

"In such an investigation as the present, it is not unworthy of notice that the production of shell is a natural operation which can be precisely imitated artificially. Such an incrustation takes place on both the outside and inside of the wheel in a bleaching establishment, in which cotton cloth is rinsed free of the lime employed in its purification. From the *dressing* employed by the weaver, the cloth obtains the animal matter, *gelatin*; this and the lime form the constituents of the incrustation, exactly as in natural shell. In the wheel employed at Catrine, in Ayrshire, where the phenomenon was first observed by the eye of science, it had required ten years to produce a coating the tenth of an inch in thickness. This incrustation has all the characters of shell, displaying a highly polished surface, beautifully iridescent, and, when broken, a foliated texture. The examination of it has even thrown some light on the character and mode of formation of natural shell. 'The plates into which the substance is divisible have been formed in succession, and certain intervals of time have elapsed between their formation; in general, every two contiguous laminæ are separated by a thin iridescent film, varying from the three to the fifty millionth part of an inch in thickness, and producing all the various colours of thin plates which correspond to intermediate thicknesses: between some of the laminæ no such film exists, probably in consequence of the interval of time between their formation being too short; and between others the film has been formed of unequal thickness. There can be no doubt that these iridescent films are formed when the dash-wheel is at rest during the night, and that when no film exists between two laminæ, an interval too short for its formation (arising, perhaps, from the stopping of the work during the day) has elapsed during the drying or induration of one lamina and the deposition of another.' From this it has been deduced, by a patient investigation, that those colours of mother-of-pearl, which are incommunicable to wax, arise from iridescent films deposited between the laminæ of its structure, and it is hence inferred that *the animal*, like the wheel, *rests periodically from its labours in forming the natural substance*.

"These, it will be owned, are curious and not irrelevant facts; but it will be asked what actual experience says respecting the origination of life. Are there, it will be said, any authentic instances of either plants or animals of however humble and simple a kind, having come into existence otherwise than in the ordinary way of generation, since the time of which geology forms the record? It may be answered that the negative of this question could not be by any means formidable to the doctrine of law-creation, seeing that the conditions necessary for the operation of the supposed life-creating laws may not have existed within record to any great extent. On the other hand, as we see the physical laws of early times still acting with more or less force, it might not be unreasonable to expect that we should still see some remnants, or partial and occasional workings of the life-creating energy amidst a sytem of things generally stable and at rest. Are there, then, any such remnants to be traced in our own day, or during man's existence upon earth? If there be, it clearly would form a strong evidence in favour of the doctrine, as what now takes place upon a confined scale and in a comparatively casual manner may have formerly taken place on a great scale, and as the proper and eternity-destined means of supplying a vacant globe with suitable tenants. It will at the same time be observed that, the earth being now supplied with both kinds of tenants in great abundance, we only could expect to find the life-originating power at work in some very special and extraordinary circumstances, and probably only in the inferior and obscurer departments of the vegetable and animal kingdoms.

"Perhaps, if the question were asked of ten men of approved reputation in science, nine out of the number would answer in the negative. This is because, in a great number of instances where the superficial observers of former times assumed a non-generative origin for life (as in the celebrated case in Virgil's fourth Georgic),

either the direct contrary has been ascertained, or exhaustive experiments have left no alternative from the conclusion that ordinary generation did take place, albeit in a manner which escapes observation. Finding that an erroneous assumption has been formed in many cases, modern inquirers have not hesitated to assume that there can be no case in which generation is not concerned; an assumption not only unwarranted by, but directly opposed to, the principles of philosophical investigation. Yet this is truly the point at which the question now rests in the scientific world.

"I have no wish here to enter largely into a subject so wide and so full of difficulties; but I may remark, that the explanations usually suggested where life takes its rise without apparent generative means, always appear to me to partake much of the fallacy of the *petitio principii*. When, for instance, lime is laid down upon a piece of waste moss ground, and a crop of white clover for which no seeds were sown is the consequence, the explanation that the seeds have been dormant there for an unknown time, and were stimulated into germination when the lime produced the appropriate circumstances, appears extremely unsatisfactory, especially when we know that (as in an authentic case under my notice) the spot is many miles from where clover is cultivated, and that there is nothing for six feet below but pure peat moss, clover seeds being, moreover, known to be too heavy to be transported, as many other seeds are, by the winds. Mushrooms, we know, can be propagated by their seed; but another mode of raising them, well known to the gardener, is to mix cow and horse dung together, and thus form a bed in which they are expected to grow without any seed being planted. It is assumed that the seeds are carried by the atmosphere, unperceived by us, and, finding here an appropriate field for germination, germinate accordingly; but this is only assumption, and though designed to be on the side of a severe philosophy, in reality makes a pretty large demand on credulity. There are several persons eminent in science who profess at least to find great difficulties in accepting the doctrine of invariable generation. One of these, in the work noted below,* has stated several considerations arising from analogical reasoning, which appear to him to throw the balance of evidence in favour of the aboriginal production of infusoria, the vegetation called mould, and the like. One seems to be of great force; namely, that the ther hypothetically) to be produced by ova, are afterwards found increasing their numbers, not by that mode at all, but by division of their bodies. If it be the nature of these creatures to propagate in this splitting or fissiparous manner, how could they be communicated to a vegetable infusion? Another fact of very high importance is presented in the following terms:—'The nature of the animalcule, or vegetable production, bears a constant relation to the state of the infusion, so that, in similar circumstances, the same are always produced without this being influenced by the atmosphere. There seems to be a certain *progressive advance in the productive powers of the infusion*, for at the first the animalcules are only of the smaller kinds, or monads, and afterwards *they become gradually larger and more complicated in their structure; after a time, the production ceases, although the materials are by no means exhausted.* When the quantity of water is very small, and the organic matter abundant, the production is usually of a vegetable nature; when there is much water, animalcules are more frequently produced.' It has been shown by the opponents of this theory, that when a vegetable infusion is debarred from the contact of the atmosphere, by being closely sealed up or covered with a layer of oil, no animalcules are produced; but it has been said, on the other hand, that the exclusion of the air may prevent some simple condition necessary for the aboriginal development of life—and nothing is more likely. Perhaps the prevailing doctrine is in nothing placed in greater difficulties, than it is with regard to the entozoa, or creatures which live within the bodies of others. These creatures do, and apparently can, live nowhere else than in the interior of other living bodies, where they generally take up their abode in the viscera, but also sometimes in the chambers of the eye, the interior of the brain, the serous sacs, and other places having no communication from without. Some are viviparous, others oviparous. Of the latter it cannot reasonably be supposed that the ova ever pass through the medium of the air, or through the blood-vessels, for they are too heavy for the one transit, and too large for the other. Of the former, it cannot be conceived how they pass into young animals—certainly not by communication from the parent, for it has often been found that entozoa do not appear in certain generations, and some of peculiar and noted character have only appeared at rare intervals, and in very extraordinary circumstances. A candid view of the less popular doctrine, as to the origin of this humble form of life, is taken by a distinguished

* Dr. Allen Thompson, in the article "Generation," in Todd's Cyclopædia of Anatomy and Physiology.

animalcules, which are supposed (altogeliving naturalist. 'To explain the beginning of these worms within the human body, on the common doctrine that all created beings proceed from their likes, or a primordial egg, is so difficult, that the moderns have been driven to speculate, as our fathers did, on their spontaneous birth; but they have received the hypothesis with some modification. Thus it is not from putrefaction or fermentation that the entozoa are born, for both of these processes are rather fatal to their existence, but from the aggregation and fit apposition of matter which is already organised, or has been thrown from organised surfaces..... Their origin in this manner is not more wonderful or more inexplicable than that of many of the inferior animals from sections of themselves.....Particles of matter fitted by digestion and their transmission through a living body, for immediate assimilation with it, or flakes of lymph detached from surfaces already organized, seem neither to exceed nor fall below that simplicity of structure which favors this wonderful development; and the supposition that, like morsels of a planaria, they may also, when retained in contact with living parts and in other favourable circumstances, continue to live and be gradually changed into creatures of analogous conformation, is surely not so absurd as to be brought into comparison with the metamorphoses of Ovid.....We think the hypothesis is also supported in some degree by the fact, that the origin of the entozoa is favoured by all causes which tend to disturb the equality between the secerning and absorbent systems.' Here particles of organised matter are suggested as the germinal origin of distinct and fully organised animals, many of which have a highly developed reproductive system. How near such particles must be to the inorganic form of matter may be judged from what has been said within the last few pages. If, then, this view of the production of entozoa be received, it must be held as in no small degree favourable to the general doctrine of an organic creation by law (4).

"There is another series of facts, akin to the above, and which deserve not less attention. The pig, in its domestic state, is subject to the attacks of a hydatid, from which the wild animal is free; hence the disease called measles in pork. The domestication of the pig is of course an event subsequent to the origin of man; indeed, comparatively speaking, a recent event. Whence, then, the first progenitor of this hydatid? So also there is a tinea which attacks dressed wool, but never touches it in its unwashed state. A particular insect disdains all food but chocolate, and the larva of the *oinopota cellaris* lives nowhere but in wine and beer, all of these being articles manufactured by man. There is likewise a creature called the *pimelodes cyclopum*, which is only found in subterranean cavities connected with certain specimens of the volcanic formation in South America, dating from a time posterior to the arrangements of the earth for our species. Whence the first pymelodes cyclopum? Will it, to a geologist, appear irrational to suppose that, just as the pterodactyle was added in the era of the new red sandstone, when the earth had become suited for such a creature, so may these creatures have been added when media suitable for their existence arose, and that such phenomena may take place any day, the only cause for their taking place seldom being the rarity of the rise of new physical conditions on a globe which seems to have already undergone the principle part of its destined mutations?

"Between such isolated facts and the greater changes which attended various geological eras, it is not easy to see any difference, besides simply that of the scale on which the respective phenomena took place, as the throwing off of one copy from an engraved plate is exactly the same process as that by which a thousand are thrown off. Nothing is more easy to conceive than that to Creative Providence, the numbers of such phenomena, the time when, and the circumstances under which they take place, are indifferent matters. The Eternal One has arranged for everything beforehand, and trusted all to the operation of the laws of his appointment, himself being ever present in all things. We can even conceive that man, in his many doings upon the surface of the earth, may occasionally, without his being aware of it, or otherwise, act as an instrument in preparing the association of conditions under which the creative laws work; and perhaps some instances of his having acted as such an instrument have actually occurred in our own time.

"I allude, of course, to the experiments conducted a few years ago by Mr. Crosse, which seemed to result in the production of a heretofore unknown species of insect in considerable numbers. Various causes have prevented these experiments and their results from receiving candid treatment, but they may perhaps be yet found to have opened up a new and most interesting chapter of nature's mysteries. Mr. Crosse was pursuing some experiments in crystallisation, causing a powerful voltaic battery to operate upon a saturated solution of silicate of potash, when the insects unexpectedly

made their appearance. He afterwards tried nitrate of copper, which is a deadly poison, and from that fluid also did live insects emerge. Discouraged by the reception of his experiments, Mr. Crosse soon discontinued them; but they were some years after pursued by Mr. Weekes, of Sandwich, with precisely the same results. This gentleman, besides trying the first of the above substances, employed ferro-cyanet of potash, on account of its containing a larger portion of carbon, the principal element of organic bodies; and from this substance the insects were produced *in increased numbers*. A few weeks sufficed for this experiment, with the powerful battery of Mr. Crosse; but the first attempts of Mr. Weekes required about eleven months, a ground of presumption in itself that the electricity was chiefly concerned in the phenomenon. The changes undergone by the fluid operated upon, were in both cases remarkable, and nearly alike. In Mr. Weekes's apparatus, the silicate of potash became first turbid, then of a milky appearance; round the negative wire of the battery, dipped into the fluid, there gathered a quantity of *gelatinous matter*, a part of the process of considerable importance, considering that gelatin is one of the *proximate principles*, or first compounds, of which animal bodies are formed. From this matter Mr. Weekes observed one of the insects in the very act of emerging, immediately after which, it ascended to the surface of the fluid, and sought concealment in an obscure corner of the apparatus. The insects produced by both experimentalists seem to have been the same, a species of acarus, minute and semi-transparent, and furnished with long bristles, which can only be seen by the aid of the microscope. It is worthy of remark, that some of these insects, soon after their existence had commenced, were found to be likely to extend their species. They were sometimes observed to go back to the fluid to feed, and occasionally they devoured each other.

"The reception of novelties in science must ever be regulated very much by the amount of kindred or relative phenomena which the public mind already possesses and acknowledges, to which the new can be assimilated. A novelty, however true, if there be no received truths with which it can be shewn in harmonious relation, has little chance of a favourable hearing. In fact, as has been often observed, there is a measure of incredulity from our ignorance as well as from our knowledge, and if the most distinguished philosopher three hundred years ago had ventured to develop any striking new fact which only could harmonise with the as yet unknown Copernican solar system, we cannot doubt that it would have been universally scoffed at in the scientific world, such as it then was, or at the best interpreted in a thousand wrong ways in conformity with ideas already familiar. The experiments above described, finding a public mind which had never discovered a fact or conceived an idea at all analogous, were of course ungraciously received. It was held to be impious, even to surmise that animals could have been formed through any instrumentality of an apparatus devised by human skill. The more likely account of the phenomena was said to be, that the insects were only developed from ova, resting either in the fluid or in the wooden frame on which the experiments took place. On these objections the following remarks may be made. The supposition of impiety arises from an entire misconception of what is implied by an aboriginal creation of insects. The experimentalists could never be considered as the author of the existence of these creatures, except by the utmost unreasoning ignorance. The utmost that can be claimed for, or imputed to him is that he arranged the natural conditions under which the true creative energy—that of the Divine Author of all things—was pleased to work in that instance. On the hypothesis here brought forward the *acarus Crossii* was a type of being ordained from the beginning, and destined to be realised under certain physical conditions. When a human hand brought these conditions into the proper arrangement, it did an act akin to hundreds of famliar ones which we execute every day, and which are followed by natural results; but it did nothing more. The production of the insect, if it did take place as assumed, was as clearly an act of the Almighty himself, as if he had fashioned it with hands. For the presumption that an act of aboriginal creation did take place, there is this to be said, that, in Mr. Weekes's experiment, every care that ingenuity could devise was taken to exclude the possibility of a development of the insects from ova. The wood of the frame was baked in a powerful heat; a bell-shaped glass covered the apparatus, and from this the atmosphere was excluded by the constantly rising fumes from the liquid, for the emission of which there was an aperture so arranged at the top of the glass, that only these fumes could pass. The water was distilled, and the substance of the silicate had been subjected to white heat. Thus every source of fallacy seemed to be shut up. In such circumstances, a candid mind, which sees nothing either impious or unphilosophical in the idea of a new

creation, will be disposed to think that there is less difficulty in believing in such a creation having actually taken place, than in believing that in two instances, separated in place and time, exactly the same insects should have chanced to arise from concealed ova, and these a species heretofore unknown." The next chapter is on the "Hypothesis of the *Development* of the Vegetable and Animal Kingdoms," and the author proceeds—

"It has been already intimated, as a general fact, that there is an obvious gradation amongst the families of both the vegetable and animal kingdoms, from the simple lichen and animalcule respectively up to the highest order of dicotyledonous trees and the mammalia. Confining our attention, in the meantime, to the animal kingdom—it does not appear that this gradation passes along one line, on which every form of animal life can be, as it were, strung; there may be branching or double lines at some places; or the whole may be in a circle composed of minor circles, as has been recently suggested. But still it is incontestable that there are general appearances of a scale beginning with the simple and advancing to the complicated. The animal kingdom was divided by Cuvier into four sub-kingdoms, or divisions, and these exhibit an unequivocal gradation in the order in which they are here enumerated:—Radiata (polypes, &c.), mollusca (pulpy animals), articulata (jointed animals), vertebrata (animals with internal skeleton). The gradation can, in like manner, be clearly traced in the *classes* into which the sub-kingdoms are subdivided, as, for instance, when we take those of the vertebrata in this order—reptiles, fishes, birds, mammals.

"While the external forms of all these various animals are so different, it is very remarkable that the whole are, after all, variations of a fundamental plan, which can be traced as a basis throughout the whole, the variations being merely modifications of that plan to suit the particular conditions in which each particular animal has been designed to live. Starting from the primeval germ, which, as we have seen, is the representative of a particular order of full-grown animals, we find all others to be merely advances from that type, with the extension of endowments and modification of forms which are required in each particular case; each form, also, retaining a strong affinity to that which precedes it, and tending to impress its own features on that which succeeds. This unity of structure, as it is called, becomes the more remarkable, when we observe that the organs, while preserving a resemblance, are often put to different uses. For example: the ribs become, in the serpent, organs of locomotion, and the snout is extended, in the elephant, into a prehensile instrument.

"It is equally remarkable that analogous purposes are served in different animals by organs essentially different. Thus, the mammalia breathe by lungs; the fishes by gills. These are not modifications of one organ, but distinct organs. In mammifers, the gills exist and act at an early stage of the fœtal state, but afterwards go back and appear no more; while the lungs are developed. In fishes, again, the gills only are fully developed; while the lung structure either makes no advance at all, or only appears in the rudimentary form of an air bladder. So, also, the baleen of the whale and the teeth of the land mammalia are different organs. The whale, in embryo, shows the rudiments of teeth; but these not being wanted, are not developed, and the baleen is brought forward instead. The land animals, we may also be sure, have the rudiments of baleen in their organisation. In many instances, a particular structure is found advanced to a certain point in a particular set of animals (for instance, feet in the serpent tribe), although it is not there required in any degree; but the peculiarity, being carried a little farther forward, is perhaps useful in the next set of animals in the scale. Such are called rudimentary organs. With this class of phenomena are to be ranked the useless mammæ of the male human being, and the unrequired process of bone in the male opossum, which is needed in the female for supporting her pouch. Such curious features are most conspicuous in animals which form links between various classes.

"As formerly stated, the marsupials, standing at the bottom of the mammalia, show their affinity to the oviparous vertebrata, by the rudiments of two canals passing from near the anus to the external surfaces of the viscera, which are fully developed in fishes, being required by them for the respiration of aerated waters, but which are not needed by the atmosphere-breathing marsupials. We have also the peculiar form of the sternum and rib-bones of the lizards *represented* in the mammalia in certain white cartilaginous lines traceable among their abdominal muscles. The struphionidæ (birds of the ostrich type) form a link between birds and mammalia, and in them we find the wings imperfectly or not at all developed, a diaphragm and urinary sac (organs wanting in other birds), and feathers approaching the nature of hair. Again, the ornithorynchus belongs to a class at the bottom of the mammalia, and approximating to birds, and in it behold the bill and web-feet of that order!

"For further illustration, it is obvious that, various as may be the lengths of the upper part of the vertebral column in the mammalia, it always consists of the same parts. The giraffe has in its tall neck the same number of bones with the pig, which scarcely appears to have a neck at all. Man, again, has no tail; but the notion of a much-ridiculed philosopher of the last century is not altogether, as it happens, without foundation, for the bones of a caudal extremity exist in an undeveloped state in the *os coccygis* of the human subject. The limbs of all the vertebrate animals are, in like manner, on one plan, however various they may appear. In the hind-leg of a horse, for example, the angle called the hock is the same part which in us forms the heel; and the horse, and all other quadrupeds, with almost the solitary exception of the bear, walk, in reality, upon what answers to the toes of a human being. In this and many other quadrupeds the fore part of the extremities is shrunk up in a hoof, as the tail of the human being is shrunk up in the bony mass at the bottom of the back. The bat, on the other hand, has these parts largely developed. The membrane, commonly called its wing, is framed chiefly upon bones answering precisely to those of the human hand; its extinct congener, the pterodactyle, had the same membrane extended upon the fore-finger only, which in that animal was prolonged to an extraordinary extent. In the paddles of the whale and other animals of its order, we see the same bones as in the more highly developed extremeties of the land mammifers; and even the serpent tribes, which present no external appearance of such extremeties, possess them in reality, but in an undeveloped or rudimental state.

"These facts (says the author) clearly show how all the various organic forms of our world are bound up in one—how a fundamental unity pervades and embraces them all....After what we have seen, the idea of a *separate exertion* [by the Deity] for each must appear totally inadmissable. *The single fact of abortive or rudimentary organs condemns it; for these*, on such a supposition, *could be regarded in no other light than as blemishes or blunders*" (5).

"We have yet to advert to the most interesting class of facts connected with the laws of organic development. It is only in recent times that physiologists have observed that each animal passes, in the course of its germinal history, through a series of changes resembling the *permanent forms* of the various orders of animals inferior to it in the scale. Thus, for instance, an insect, standing at the head of the articulated animals, is, in the larva state, a true annelid, or worm, the annelida being the lowest in the same class. The embryo of a crab resembles the perfect animal of the inferior order myriapoda, and passes through all the forms of transition which characterise the intermediate tribes of crustacea. The frog, for some time after its birth, is a fish with external gills, and other organs fitting it for an aquatic life, all of which are changed as it advances to maturity, and becomes a land animal. The mammifer only passes through still more stages, according to its higher place in the scale. Nor is man himself exempt from this law. His first form is that which is permanent in the animalcule. His organisation gradually passes through conditions generally resembling a fish, a reptile, a bird, and the lower mammalia, before it attains its specific maturity. At one of the last stages of his fœtal career, he exhibits an intermaxillary bone which is characteristic of the perfect ape; this is suppressed, and he may then be said to take leave of the simial type, and become a true human creature. Even, as we shall see, the varieties of his race are represented in the progressive development of an individual of the highest, before we see the adult Caucasian, the highest point yet attained in the animal scale.

"To come to particular points of the organisation. The brain of man, which exceeds that of all other animals in complexity of organisation and fulness of development, is, at one early period, only 'a simple fold of nervous matter, with difficulty distinguishable into three parts, while a little tail-like prolongation towards the hinder parts, and which had been the first to appear, is the only representation of a spinal marrow. Now, in this state it perfectly resembles the brain of an adult fish, thus assuming *in transitu* the form that in the fish is permanent. In a short time, however, the structure is become more complex, the parts more distinct, the spinal marrow better marked; it is now the brain of a reptile. The change continues; by a singular motion, certain parts (*corpora quadragemina*) which had hitherto appeared on the upper surface, now pass towards the lower; the former is their permanent situation in fishes and reptiles, the latter in birds and mammalia. This is another advance in the scale, but more remains yet to be done. The complication of the organ increases; cavities termed *ventricles* are formed, which do not exist in fishes, reptiles, or birds; curiously organised parts, such as the corpora striata, are added; it is now the brain of the mammalia. Its last and final change alone seems wanting, that which shall render it the brain of MAN.—(Lords' Popular Phisiology.) And this change in time takes place.

"So also with the heart. This organ, in the mammalia, consists of four cavities, but in the reptiles of only three, and in fishes of two only, while in the articulated animals it is merely a prolonged tube. Now in the mammal fœtus, at a certain early stage, the organ has the form of a prolonged tube; and a human being may be said to have then the heart of an insect. Subsequently it is shortened and widened, and becomes divided by a contraction into two parts, a ventricle and an auricle; it is now the heart of a fish. A subdivision of the auricle afterwards makes a triple chambered form, as in the heart of the reptile tribes; lastly, the ventricle being also subdivided, it becomes a full mammal heart.....

The tendency of all these illustrations is to make us look to *development* as the principle which has been immediately concerned in the peopling of this globe, a process extending over a vast space of time, but which is nevertheless connected in character with the briefer process by which an individual being is evoked from a simple germ. What mystery is there here—and how shall I proceed to enunciate the conception which I have ventured to form of what may prove to be its proper solution! It is an idea by no means calculated to impress by it greatness, or to puzzle by its profoundness. It is an idea more marked by simplicity than perhaps any other of those which have explained the great secrets of nature. But in this lies, perhaps, one of its strongest claims to the faith of mankind.

"The whole train of animated beings, from the simplest and oldest up to the highest and most recent, are, then, to be regarded as a series of *advances of the principle of development*, which have depended upon external physical circumstances, to which the resulting animals are appropriate. I contemplate the whole phenomena as having been in the first place arranged in the counsels of Divine Wisdom, to take place, not only upon this sphere, but upon all the others in space, under necessary modifications, and as being carried on, from first to last, here and elsewhere, under immediate favour of the creative will or energy. The nucleated vesicle, the fundamental form of all organisation, we must regard as the meeting-point between the inorganic and the organic—the end of the mineral and beginning of the vegetable and animal kingdoms, which thence start in different directions, but in perfect parallelism and analogy. We have already seen that this nucleated vesicle is itself a type of mature and independent being in the infusory animalcules, as well as the starting point of the fœtal progress of every higher individual in creation, both animal and vegetable. We have seen that it is a form of being which electric agency will produce—though not perhaps usher into full life—in albumen, one of those compound elements of animal bodies, of which another (urea) has been made by artificial means. Remembering these things, we are drawn on to the supposition that the first step in the creation of life upon this planet was *a chemico-electric operation, by which simple germinal vesicles were produced.* This is so much, but what were the next steps? Let a common vegetable infusion help us to an answer. There, as we have seen, simple forms are produced at first, but afterwards they become more complicated, until at length the life-producing powers of the infusion are exhausted. Are we to presume that, in this case, the simple engender the complicated? Undoubtedly, this would not be more wonderful as a natural process than one which we never think of wondering at, because familiar to us—namely, that in the gestation of the mammals, the animalcule-like ovum of a few days is the parent, in a sense, of the chick-like form of a few weeks, and that in all the subsequent stages—fish, reptile, &c.—the one may, with scarcely a metaphor, be said to be the progenitor of the other. I suggest, then, as an hypothesis already countenanced by much that is ascertained, and likely to be further sanctioned by much that remains to be known, that the first step was *an advance under favour of peculiar conditions, from the simplest forms of being, to the next more complicated, and this through the medium of the ordinary process of generation.*

.....It is fully established that a human family, tribe, or nation, is liable, in the course of generations, to be either advanced from a mean form to a higher one, or degraded from a higher to a lower, by the influence of the physical conditions in which it lives. The coarse features, and other structural peculiarities of the negro race only continue while these people live amidst the circumstances usually associated with barbarism. In a more temperate clime, and higher social state, the face and figure become greatly refined. The few African nations which possess any civilisation also exhibit forms approaching the European; and when the same people in the United States of America have enjoyed a within-door life for several generations, they assimilate to the whites amongst whom they live. On the other hand, there are authentic instances of a people originally well-formed and good-looking, being brought, by imperfect diet and a variety of physical hardships, to a meaner form. It is remarkable that prominence of the jaws, a recession

and diminution of the cranium, and an elongation and attenuation of the limbs, are peculiarities always produced by these miserable conditions, for they indicate an unequivocal retrogression towards the type of the lower animals. Thus we see nature alike willing to go back and to go forward. Both effects are simply the result of the operation of the law of development in the generative system. Give good conditions, it advances; bad ones, it recedes. Now, perhaps, it is only because there is no longer a possibility, in the higher types of being, of giving sufficiently favourable conditions to carry on species to species, that we see the operation of the law so far limited.

"Let us trace this law also in the production of certain classes of monstrosities. A human fœtus is often left with one of the most important parts of its frame imperfectly developed: the heart for instance, goes no farther than the three-chambered form, so that it is the heart of a reptile. There are even instances of this organ being left in the two-chambered or fish form. Such defects are the result of nothing more than a failure of the power of development in the system of the mother, occasioned by weak health or misery. Here we have apparently a realisation of the converse of those conditions which carry on species to species, so far, at least, as one organ is concerned. Seeing a complete specific retrogression in this one point, how easy it is to imagine an access of favourable conditions sufficient to reverse the phenomenon, and make a fish mother develop a reptile heart, or a reptile mother develop a mammal one. It is no great boldness to surmise that a super-adequacy in the measure of this under-adequacy (and the one thing seems as natural an occurrence as the other) would suffice in a goose to give its progeny the body of a rat, and produce the ornithorynchus, or might give the progeny of an ornithorynchus the mouth and feet of a true rodent, and thus complete at two stages the passage from the aves to the mammalia (6).

"Perhaps even the transition from species to species does still take place in some of the obscurer fields of creation, or under extraordinary casualties, though science professes to have no such facts on record. It is here to be remarked, that such facts might often happen, and yet no record be taken of them, for so strong is the prepossession for the doctrine of invariable like production, that such circumstances, on occurring, would be almost sure to be explained away on some other supposition, or, if presented, would be disbelieved and neglected (7). Science, therefore, has no such facts, for the very same reason that some small sects are said to have no discreditable members—namely, that they do not receive such persons, and extrude all who begin to verge upon the character. There are, nevertheless, some facts which have chanced to be reported without any reference to this hypothesis, and which it seems extremely difficult to explain satisfactorily upon any other. One of these has already been mentioned—a progression in the forms of the animalcules in a vegetable infusion from the simpler to the more complicated, a sort of microcosm representing the whole history of the progress of animal creation as displayed by geology. Another is given in the history of the Acarus Crossii, which may be only the ultimate stage of a series of similar transformations effected by electric agency in the solution subjected to it. There is, however, one direct case of a translation of species, which has been presented with a respectable amount of authority. It appears, that, whenever oats sown at the usual time are kept cropped down during summer and autumn, and allowed to remain over the winter, a thin crop of rye is the harvest presented at the close of the ensuing summer. This experiment has been tried repeatedly, with but one result; invariably the *secale cereale* is the crop reaped where the *avena sativa*, a recognised different species was sown. Now it will not satisfy a strict inquirer to be told that the seeds of the rye were latent in the ground and only superseded the dead product of the oats; for if any such fact were in the case, why should the usurping grain be always rye? Perhaps those curious facts which have been stated with regard to forests of one kind of trees, when burnt down, being succeeded (without planting) by other kinds, may yet be found most explicable, as this is, upon the hypothesis of a progression of species which takes place under certain favouring conditions, now apparently of comparatively rare occurrence. The case of the oats is the more valuable, as bearing upon the suggestion as to a protraction of the gestation at a particular part of its course. Here the generative process is, by the simple mode of cropping down, kept up for a whole year beyond its usual term. The type is thus allowed to advance, and what was oats becomes rye.

"The idea, then, which I form of the progress of organic life upon the globe—and the hypothesis is applicable to all similar theatres of vital being—is, *that the simplest and most primitive type, under a law to which that of like-production is subordinate, gave birth to the type next above it, that this again produced the next higher, and so on to the very highest*, the stages of advance being in all cases very small—namely, from one species only to another; so that the phenomenon has always been of a simple and modest character. Whether the whole of any spe-

cies was at once translated forward, or only a few parents were employed to give birth to the new type, must remain undetermined; but, supposing that the former was the case, we must presume that the moves along the line or lines were simultaneous, so that the place vacated by one species was immediately taken by the next in succession, and so on back to the first, for the supply of which the formation of a new germinal vesicle out of inorganic matter was alone necessary. Thus, the production of new forms as shown in the pages of the geological record, has never been anything more than a new stage of progress in gestation, an event as simply natural, and attended as little by any circumstances of a wonderful or startling kind, as the silent advance of an ordinary mother from one week to another of her pregnancy. Yet, be it remembered, the whole phenomena are, in another point of view, wonders of the highest kind, for in each of them we have to trace the effect of an Almighty Will which had arranged the whole in such harmony with external physical circumstances, that both were developed in parallel steps—and probably this development upon our planet is but a sample of what has taken place, through the same cause, in all the other countless theatres of being which are suspended in space.

"This may be the proper place at which to introduce the preceding illustrations in a form calculated to bring them more forcibly before the mind of the reader. [The author then says that a table which he gives was suggested "in consequence of seeing the scale of animated nature presented in Dr. Fletcher's Rudiments of Physiology," and which we have given in another form.] Taking that scale as its basis, it shows the wonderful parity observed in the progress of creation, as presented to our observation in the succession of fossils, and also in the fœtal progress of one of the principal human organs (8). This scale, it may be remarked, was not made up with a view to support such an hypothesis as the present, nor with any apparent regard to the history of fossils, but merely to express the appearance of advancement in the orders of the Cuvierian system, assuming, as the criterion of that advancement, 'an increase in the number and extent of the manifestations of life, or of the relations which an organised being bears to the external world.' Excepting in the relative situation of the annelida and a few of the mammal orders, the parity is perfect; nor may even these small discrepancies appear when the order of fossils shall have been further investigated, or a more correct scale shall have been formed. Meanwhile, it is a wonderful evidence in favour of our hypothesis, that a scale formed so arbitrarily should coincide to such a nearness with our present knowledge of the succession of animal forms upon earth, and also that both of these series should harmonise so well with the view given by the modern physiologists of the embryotic progress of one of the organs of the highest order of animals."

The Fœtal Human Brain resembles in the 1st month, that of an *avertebrated animal.* And corresponds with the brains of the animals found in—1. gneiss and mica-slate system*; zoophyta, polypiaria (2. clay slate and grawacke system); conchifera, double-shelled mollusks, crustacea (3. silurian system); annelida; crustaceous fishes (4. old red sandstone).

The 2nd month, that of a *fish.* And corresponds with—True fishes (5. carboniferous formation).

The 3rd month, that of a *turtle.* And corresponds with—Piscine saurians (ichthyosaurus, &c.), pterodactyles, crocodiles, tortoises, batrachians (6. new red sandstone).

The 4th month, that of a *bird.*

(In 7. oolite, 8. cretaceous formation, there is a blank, the bone only of an animal belonging to the class mammalia (a marsupial animal) having been found.

The 5th month, that of a *rodent;* the 6th month, that of a *ruminant.* And corresponds with—Pachydermata (tapirs, horses), rodentia (dormouse, squirrel), marsupialia, or racoon, opossum (9. lower eocene).

The 7th month, that of a *digitigrade* animal. And corresponds with—Genette, fox, wolf (10. miocene).

The 8th month, that of the *quadrumana.* And corresponds with—Monkeys (11. pliocene).

The 9th month, *attains a full human character.* And man is only found on the superficial deposits.

So, in the scale of the *animal kingdom.* The fœtal human brain resembles in succession the brains distinguishing the classes in the four great divisions of Cuvier.

The 1st month—the radiata, mollusca, articulata. 2nd month—pisces (fishes). 3rd month—reptilia (reptiles). 4th month—aves (birds). 5th, 6th, 7th, 8th, and 9th—the class mammalia, in its various orders.

"The reader has seen physical conditions several times referred to, as to be presumed to have in some way governed the progress of the development of the zoological circle. This language may seem vague, and, it may be asked—can any particular

* The Geological strata are numbered according to the order of their ascension. Gneiss and mica-slate being the lowest in which organic remains are found.

physical condition be adduced as likely to have affected development? To this it may be answered, that air and light are probably amongst the principal agencies of this kind which operated in educing the various forms of being. Light is found to be essential to the development of the individual embryo. When tadpoles were placed in a perforated box, and that box sunk in the Seine, light being the only condition thus abstracted, they grew to a great size in their original form, but did not pass through the usual metamorphose which brings them to their mature state as frogs. The proteus, an animal of the frog kind, inhabiting the subterraneous waters of Carniola, and which never acquires perfect lungs so as to become a land animal, is presumed to be an example of arrested development, from the same cause. When, in connexion with these facts, we learn that human mothers living in dark and close cells under ground—that is to say, with an inadequate provision of air and light—are found to produce an unusual proportion of defective children, we can appreciate the important effects of both these physical conditions in ordinary reproduction. Now there is nothing to forbid the supposition that the earth has been at different stages of its career under different conditions, as to both air and light. On the contrary, we have seen reason for supposing that the proportion of carbonic acid gas (the element fatal to animal life) was larger at the time of the carboniferous formation than it afterwards became. We have also seen that astronomers regard the zodiacal light as a residuum of matter enveloping the sun, and which was probably at one time denser than it is now. Here we have the indications of causes for a progress in the purification of the atmosphere and in the diffusion of light during the earlier ages of the earth's history, with which the progress of organic life may have been conformable. An accession to the proportion of oxygen, and the effulgence of the central luminary, may have been the immediate prompting cause of all those advances from species to species which we have seen, upon other grounds, to be necessarily supposed as having taken place. And causes of the like nature may well be supposed to operate on other spheres of being, as well as on this. I do not indeed present these ideas as furnishing the true explanation of the progress of organic creation; they are merely thrown out as hints towards the formation of a just hypothesis, the completion of which is only to be looked for when some considerable advances shall have been made in the amount and character of our stock of knowledge.

"Early in this century, M. Lamarck, a naturalist of the higher character, suggested an hypothesis of organic progress which deservedly incurred much ridicule, although it contained a glimmer of the truth. He surmised, and endeavoured, with a great deal of ingenuity, to prove, that one being advanced in the course of generations to another, in consequence merely of its experience of wants calling for the exercise of its faculties in a particular direction, by which exercise new developments of organs took place, ending in variations sufficient to constitute a new species. Thus he thought that a bird would be driven by necessity to seek its food in the water, and that, in its efforts to swim, the outstretching of its claws whould lead to the expansion of the intermediate membranes, and it would thus become webfooted. Now it is possible that wants and the exercise of faculties have entered in some manner into the production of the phenomena which we have been considering; but certainly not in the way suggested by Lamarck, whose whole notion is obviously so inadequate to account for the rise of the organic kingdoms, that we only can place it with pity among the follies of the wise. Had the laws of organic development been known in this time, his theory might have been of a more imposing kind. It is upon these that the present hypothesis is mainly founded. I take existing natural means, and show them to have been capable of producing all the existing organisms, with the simple and easily conceivable aid of a higher generative law, which we perhaps still see operating upon a limited scale. I also go beyond the French philosopher to a very important point, the original Divine conception of all the forms of being which these natural laws were only instruments in working out and realising. The actuality of such a conception I hold to be strikingly demonstrated by the discoveries of Macleay, Vigors, and Swainson, with respect to the affinities and analogies of animal (and by implication vegetable) organisms. Such a regularity in the *structure*, as we may call it, of the *classification of animals*, as is shown in their systems, is totally irreconcilable with the idea of form going on to form merely as needs and wishes in the animals themselves dictated. Had such been the case, all would have been irregular, as things arbitrary necessarily are. But, lo, the whole plan of being is as symmetrical as the plan of a house, or the laying out of an old-fashioned garden! This must needs have been devised and arranged for beforehand. And what a preconception or forethought have we here! Let us only for a moment consider how various are the ex-

ternal physical conditions in which animals live—climate, soil, temperature, land, water, air—the peculiarities of food, and the various ways in which it is to be sought; the peculiar circumstances in which the business of reproduction and the care-taking of the young are to be attended to—all these require to be taken into account, and thousands of animals were to be formed suitable in organisation and mental character for the concerns they were to have with these various conditions and circumstances—here a tooth fitted for crushing nuts; there a claw fitted to serve as a hook for suspension; here to repress teeth and develop a bony net-work instead; there to arrange for a bronchial apparatus, to last only for a certain brief time; and all these animals were to be schemed out, each as a part of a great range, which was on the whole to be rigidly regular: let us, I say, only consider these things, and we shall see the decreeing of laws to bring the whole about was an act involving such a degree of wisdom and device as we only can attribute, adoringly, to the one Eternal and Unchangeable. It may be asked, how does this reflection comport with that timid philosophy which would have us to draw back from the investigation of God's works, lest the knowledge of them should make us undervalue his greatness and forget his paternal character? Does it not rather appear that our ideas of the Deity can only be worthy of him in the ratio in which we advance in a knowledge of his works and ways; and that the acquisition of this knowledge is consequently an available means of our growing in a genuine reverence for him?

"But the idea that any of the lower animals have been concerned in any way with the origin of man—is not this degrading? Degrading is a term, expressive of a notion of the human mind, and the human mind is liable to prejudices which prevent its notions from being invariably correct. Were we acquainted for the first time with the circumstances attending the production of an individual of our race, we might equally think them degrading, and be eager to deny them, and exclude them from the admitted truths of nature. Knowing this fact familiarly and beyond contradiction, a healthy and natural mind finds no difficulty in regarding it complacently (9). Creative Providence has been pleased to order that it should be so, and it must therefore be submitted to. Now the idea as to the progress of organic creation, if we become satisfied of its truth, ought to be received precisely in this spirit. It has pleased Providence to arrange that one species should give birth to another, until the second highest gave birth to man, who is the very highest: be it so, it is our part to admire and to submit. The very faintest notion of there being anything ridiculous or degrading in the theory—how absurd does it appear, when we remember that every individual amongst us actually passes through the characters of the insect, the fish and reptile (to speak nothing of others), before he is permitted to breathe the breath of life! But such notions are mere emanations of false pride and ignorant prejudice. He who conceives, them little reflects that they, in reality, involve the principle of a contempt for the works and ways of God, for it may be asked, if He, as appears, has chosen to employ inferior organisms as a generative medium for the production of higher ones, even including ourselves, what right have we, his humble creatures, to find fault? There is, also, in this prejudice, an element of unkindliness towards the lower animals, which is utterly out of place. These creatures are all of them part products of the Almighty conception, as well as ourselves. All of them display wonderous evidences of his wisdom and benevolence. All of them have had assigned to them by their Great Father a part in the drama of the organic world, as well as ourselves. Why should they be held in such contempt? Let us regard them in a proper spirit, as parts of the grand plan, instead of contemplating them in the light of frivolous prejudices, and we shall be altogether at a loss to see how there should be any degradation in the idea of our race having been genealogically connected with them."

With one more short extract we shall take leave of our author, though the reader who has not seen the original work must not imagine that we have gone through the book—far from it, we shall leave more than one-third of it untouched:—"The general conclusions regarding the geography of organic nature, may be thus stated. 1. There are numerous distinct foci of organic production throughout the earth. 2. These have everywhere advanced in accordance with the local conditions of climate, &c., as far as at least the class and order are concerned, a diversity taking place in the lower gradations. No physical or geographical reason appearing for this diversity, we are led to infer that, 3, it is the result of minute and inappreciable causes giving the law of organic development a particular direction in the lower subdivisions of the two kingdoms. 4. Development has not gone on to equal results in the various continents, being most advanced in the eastern continent, next in the western, and least in Australia, this inequality being perhaps the

result of the comparative antiquity of the various regions, geological and geographically."

The chapter succeeding those from which we have extracted are on the "Macleay System of Animated Nature" (10); "The Early History of Mankind" (11); "Mental Constitution of Animals;" and "The Purpose and General Condition of the Animated Creation"—branches of the subject which are unquestionably interesting and valuable in connexion with the perfect work, but from which it is almost impossible to make such extracts as would suit the limits of our little work, or that would be interesting to the general reader. This is not to be regretted, for the really interesting, novel, and most valuable chapters of the book are those from which we have taken the liberty to make our selections; what we have left contain corroborative and collateral evi dence of the truth, or rather probability of the truth, of the author's hypothesis. This we can, with very good grace, leave the curious to seek for in the original. Should this humble work ever meet the eye of the author of the "Vestiges," we beg him to accept our honest and hearty thanks for his most interesting and highly-valuable production; and we trust we shall again and again have the pleasure of meeting him in the literary world.

[The Notes which follow are furnished by the Editor of the "Library," and do not appear in the "Vestiges."

NOTES.

(1) Upon this the ATHENÆUM remarks, "If worlds or astral systems only existed three score years and ten, then this analogy might be of assistance; but seeing that it is quite impossible to observe a boy-star grow into a man-star, we must doubt that a *scientific* observer could become convinced that the former was the stage of the latter." Of the value of this criticism the reader may judge when he has read the opinion of the celebrated astronomer La Place, upon the nebular theory, as quoted by the *Prospective Review*: "One who should for the first time look on the trees of a forest, would justly infer that the largest oak had once been small as the tender sapling, and had passed through all the intermediate states. *So also*, looking on the nebular systems, we are impelled to believe that the star with a bur round it was once a globular but uncondensed system of luminous matter, and, earlier still, an irregular mass." The readed will perceive that the only difference between the *un*scientific (according to the ATHENÆUM) author of the "Vestiges," and the well known scientific La Place, consists in the figure of analogy.

(2) "The magnificent conclusions in which all Geologists agree, are these:—that the crust of this earth has gone through a long series of changes in the course of countless thousands of years: that organic life has been successively introduced upon it, according as it became fitted for its reception: that the animals and plants of lower organisation were first introduced: that among vertebrated animals fishes came first, then reptiles, then birds, afterwards marsupial beasts; then true mammalia; and finally man. Here a most novel fact comes out, destined to work a great revolution in human opinon. *Creation was not confined to the beginning of the world, but even on this earth has been slow, and, as it were, a continuous operation.* Previously, there seemed to be an immense chasm between the origination of species and that of individuals. Geology has now shown that no such chasm exists: that creation cannot be regarded as exceptional and an interference (if at least the originating of species be creation), and that we may reason concerning it from the analogies of our known world, seeing that it has gone on for ages after that world was in all fundamental respects what it still is. It was impossible to contemplate the series of geological phenomena without being struck with a belief, which (as far as we know) was first clearly stated in print by Sir John Herschel—'that the creator had given existence to the species of animated beings *according to some law*.' Before geology had started on its brilliant career, such an opinion might have seemed premature: yet there was already accumulating proof of the same truth from physiology and comparative anatomy. On comparing vertebrated animals at first sight most unlike—as a man and an elephant; a bat, an ostrich, and a horse—the relation between the bony structure of all proved to be far more similar than could have been expected in works each of which had been executed separately by a special operation. The conclusion was strengthened exceedingly by a comparison of the internal parts of animals, and by the continually growing knowledge of the organisation of their lower orders. To Geoffery St. Hilare, we understand, the merit belongs of having burst the trammels which confined his predecessors, and of having opened a larger view of animated nature than the illustrious Cuvier had ventured to take. Undaunted by the stigma of atheism which has rested on St. Hilare, the intrepid Baden Powell, in his excellent volume upon the Connexion of Natural and Divine Truth, has calmly reviewed the whole controversy; and has in no ambiguous terms showed his conviction, that the old-fashioned idea of

creation must, in certain important particulars, be remodelled."—(*Prospective Review*, No. I., Feb., 1845, pp. 62-3.)

(3) "What is an animal? It is an aggregate of parts, all of them composed of atoms. Now, Buffon broached a very startling theory—that all animals were made of animalcules; that these little monads, met with in such numbers in the waters around us, were the materials of which animals were made up. This theory was at once scouted as absurd; but, strange to say, *we are now coming round to the same point*, at least to the extent, not that animalcules are separate and distinct animals merely, but also *that every atom of the animal is alive*. The gigantic puff-ball found in the fields, that grew in a single night, examined under the microscope, was found to consist of an immense number of cells, each of which dividing, separates itself into two, as soon as it attains a certain degree of growth. Every one of these cells was able to nourish itself by absorbing food, and to divide itself into two cells, similar to each other, as soon as it attained this state of maturity. What more was necessary to constitute an animal? Every one of the cells must be looked upon as acting for itself, and assisting to constitute the entire mass—an aggregate being composed of hundreds of millions of these component parts."--(Professor Rymer Jones' Lectures on Palœontology at Manchester, copied from the *Manchester Guardian*, Dec. 4, 1844).

(4) "If the changes which living beings undergo during the period of their existence by the separation of their elements at a period more or less remote from their first combination, be regarded as distinguishing them in a striking and evident manner from the masses of inert matter which surround them, still more is their difference manifested in the extraordinary series of processes which constitute the function of reproduction. It need scarcely be pointed out that the earth would be soon depopulated of its tenants, were not the power of continuing their respective races, by the creation of new beings, superadded to those with which individuals are endowed, for the maintenance of their own perfection of structure and activity of condition. It was the communication of this power to the first organism of each species which occasioned its multiplication and diffusion; it is by its continued operation that the causes destructive of the existence of individuals are prevented from affecting the permanency of the race; and it is the failure of the conditions requisite for its exercise which leads to the extinction of the species, or the disappearance of the race from the surface of the globe. A very unnecessary degree of mystery has been spread around the exercise of this function, not only by general inquirers, but by scientific physiologists. It has been regarded as a process never to be comprehended by man, of which the nature and the laws are alike inscrutable. A fair comparison of it, however, with other functions, will show that it is not in reality more wonderful or more recondite than any one of them—that our acquaintance with each depends upon the facility with which it may be submitted to investigation—and that, if properly inquired into by an extensive survey of the animated world, the real character of the process, its conditions, and its mode of operation may be understood as completely as those of any other vital action. It is hoped that, in the following outline, the philosophical pursuit of such an inquiry will be shown to be perfectly consistent with the purest delicacy of feeling, so that the general as well as the professional reader may enter upon it without reserve.

"It has been formerly stated that, in its most general condition, the function of reproduction may be considered a part of that of nutrition; since, like almost all the members of the vegetable kingdom, the lowest and simplest animals are made up of a number of similar parts, which are capable, if separated naturally or artificially, of maintaining an independent existence, although originally composing but a single individual. This plan of reproduction combined with nutrition is especially manifested in the simplest algæ and fungi, where every distinct cell may be regarded as an extension of the original being, or as constituting a new one. These are instances of peculiarly *homogenous* structures, each part living for itself, and contributing but little to the maintenance of others [see note 3, on the "puff-ball"]. The more *heterogenous* a fabric becomes, however, that is to say, the more difference is manifested in the structure and properties of its individual parts—the less title has *any one* to be regarded as a separate individual, since it cannot maintain an independent existence, nor reproduce the entire structure. In the higher plants, for instance, where the absorbent surface is distinct from the exhalent and respiratory surface, neither one of these is sufficient to maintain life independently of the other, and no part can separately exist which does not combine both. But, even here, the simplicity of this combination occasions it to be very frequently repeated through the fabric: and each leaf-bud has the power, when removed from the parent, of reproducing the entire structure, if the

essential conditions be afforded to it. Although, therefore, a more *special* reproductive apparatus is here developed, the function still retains, to a certain extent, the *general* form which originally characterised it; and when this special apparatus is explained, it will be perceived to be a concentration, as it were, of that general form, and not something entirely new and superadded to it.

"Among animals, also, the same connexion of the reproductive with the nutritive function may be very distinctly traced; and although it is only in the lowest that the *general* condition of the former is manifested so apparently as in plants, it may still be traced without difficulty even in the highest. We have seen that, among the classes composing the sub-kingdom acrita, there is usually an extraordinary capability in each part of the fabric to reproduce the whole; the minute cuttings of a single hydra, for instance, developing themselves into single polypes, and a portion of the gelatinous flesh of one of the compound polypifera gradually becoming a complex and massive structure. In these classes we observe, as in the algæ, an occasional spontaneous separation of parts of the parent structure, for the production of new ones; and this may be regarded as leading us towards the more special form which the reproductive apparatus assumes, both in them and the higher animals. Among many of the lower articulata, also, the segments of the body appear to be capable of producing new individuals; and in some of the marine annelida, their separation is said to take place spontaneously, like that of articulated algæ. But, among the higher vermiform tribes, the power of maintaining a separate existence, and of reproducing the entire structure is limited to the division including the head. Proceeding to still more heterogenous beings, it is found that a mutilation apparently less in degree is fatal to the existence of both portions, because the portion which is removed has no repetition in the remainder of the fabric, and is quite incapable of developing new parts entirely dissimilar to itself. Nevertheless it may be perceived that, even in the highest animals, there is considerable power of regenerating lost parts, which may be regarded as the remnant of that general capability of reproduction which is so remarkable in the lower, and which has been superseded by the development of a more special apparatus. The formation of new claws and legs by crustacea, spiders, &c., has already been noticed; and the same thing takes place in many species of reptiles, especially among the order batrachia. In the salamander, for example, new legs with perfect bones, nerves, muscles, &c., are reproduced after the loss or severe injury of the original ones; and, in the triton, a perfect eye has been formed to replace one which had been removed. In the lizards, the tail when lost appears to be restored; the new part contains no perfect vertebræ, however, but merely a cartilaginous column like that of the lowest fishes. In mammalia in general, as in man, the power of reproducing entire organs appears to be much less considerable; but each tissue is capable of regenerating that of its own kind; and as this process of renovation is constantly taking place in the living body, nutrition has been not unjustly spoken of as a *perpetual generation*. It would seem that in some individuals this regenerating power is retained to a greater degree than by the class at large*; and that in the early period of development, as in the lower classes of animals, it is more decided than in the perfect condition. On this supposition, at least, it is easy to account for the occurrence of supernumerary parts, and even for the duplicity of a considerable portion of the body—as in monsters possessing two heads with one trunk, or one head with two trunks, or a superabundance of extremities. These are just such as may be produced in the polype by the partial division of its body. Perfect double monsters, however, where two complete bodies exist (as in the Siamese twins) obviously result from the union of two separate germs.

"The separation of parts of the parent

* "One of the most curious and well-authenticated instances of this kind is related by Mr. White in his work on the Regeneration of Animal and Vegetable Substances, 1785, p. 16. 'Some years ago, I delivered a lady of rank of a fine boy, who had two thumbs upon one hand, or rather, a thumb double from the first joint, the outer one less than the other, each part having a perfect nail. When he was about three years old, I was desired to take off the lesser one, which I did; but to my great astonishment it grew again, and along with it the nail. The family afterwards went to reside in London, where his father showed it to that excellent operator, Wm. Bromfield, Esq., surgeon to the Queen's household; who said, he supposed Mr. White being afraid of damaging the joint, had not taken it wholly out, but he would dissect it out entirely, and then it would not return. He accordingly executed the plan he had described with great dexterity, and turned the bail fairly out of the socket, notwithstanding this, it grew again, and a fresh nail was formed, and the thumb remained in this state!"

structure into new individuals, whether this be naturally or artificially effected, constitutes, therefore, the simplest and most general form of reproduction, and that which is connected most closely with the function of nutrition. It may be manifested in various ways—as in the separation of the whole structure into portions, which takes place in such articulated algæ as the diatoma — the formation of gemmæ or bulbs by the marchantia, mosses, &c., which drop off when mature, and continue the race, or remain attached to the parent —the evolution of buds in the flowering plant, which may or may not continue as part of the individual structure—the production of young polypes from the sides of the parent—the spontaneous division into two equal halves which is the principal means of reproduction in several animalcules—and the separation of the parts of annulose animals just now adverted to. On comparing all these instances together it will be seen that they all correspond in essential character, the new being originating in a peculiar development of that which previously constituted an integrant part of the parent structure; although it may be sometimes rather difficult to say which of the beings that have been the subjects of a process of this kind is to be considered as the parent. Upon this general condition of the function, the more special one may be regarded as engrafted; and this consists in the development, from some particular spot in the parent structure, of a germ, which from the first is destined to reproduce the being, and which, if not separated from its parent in the ordinary course ceases to exist. All the forms of sporuliferous, oviparous, and viviparous reproduction may be reduced to this general expression; and they will be found to coincide in this essential particular, although differing in the mode and degree of the assistance provided for the development of the germ, when no longer organically united to its parent.

"These general views must not be concluded without allusion to two important questions regarding the production of living beings, viz.—*whether they are capable, of originating from the mere combination of inorganic elements*, by the process which has been termed *spontaneous* generation; or whether they may be evolved from organised beings dissimilar to themselves, through any irregularity in their functions, or by the incipient decay or degeneration of their tissues, by the process termed *equivocal* generation. The affirmation of the first question has been maintained by many philosophers, who have regarded all matter as, in some sort, animated; and although it has been principally urged in reference to the lowest classes of beings, *it does not seem possible to limit its application*, if it be really valid. For it may be easily shown that *facts of the same class as those which appear to support the belief that fungi or infusorial animalcules may be spontaneously developed, would lead to the supposition that the higher classes of plants and animals are subject to the same law.* But some naturalists of the present time are disposed to admit this also, and to account for the changes in the races of plants and animals which geological researches reveal, by the supposition that, as old species became extinct from natural causes, new ones might arise *from the inherent tendency in all matter to become organised:* and that an elephant or an oak (*and why not a man?*) might be produced by spontaneous or accidental combination of its elements.

[The author has a note here, which we give in order to escape any imputation of unfairness, or a wish to support any particular theory of our own, and not from any value which we think attaches to it; for we are of opinion that its intended effect is considerably weakened, if not entirely destroyed, by the succeeding paragraph of the text:—"Such a doctrine it is impossible to refute, otherwise than by an appeal to facts. No such new creations are known to us at the present time, and therefore it can only be argued from analogy that they ever existed.* We may believe that there exists in all matter a tendency to become organised, without relinquishing the doctrine that, for the manifestation of such tendency, a previously existing organism is required, to collect and unite the scattered elements by the powers with which it alone is endowed. For the enunciation of this extraordinary doctrine, and the flimsy reasoning by which it is supported, see Dr. Weissenborn's paper on the subject in the Lond. and Edinb. Philos. Mag. for July, 1838. However well such speculations may suite German taste, the English public is happily not yet quite ripe for them. That *species* have in all ages of the globe maintained their present uniformity and narrow limits of variation, the author is not disposed to assert, and he thinks that many facts tend to prove the relaxation, at former epochs, of the strictness of the laws which are at present regarded as governing their modification and reproduction"—(p.p. 394–5). The author says in another note, that the terms *spontaneous* generation and *equivocal* generation "have been used *synonimously* by many writers; but the dis-

* "It will have been seen that the author of the "Vestiges" has answered this.

tinction which is here drawn is an *important one*, and has been made by later physiologists." We must confess to an inability to perceive any real or substantial difference between the terms. We think it is a distinction without a difference. It may be very useful to have different terms to express certain phenomena which do not result from precisely the same circumstances, in order the more readily to convey to the mind the class of circumstances to which any particular phenomenon belongs; but further than this it is entirely useless, and oftentimes, unquestionably, injurious and mischievous. The decomposition or decay of an organised body destroys the difference which previously existed between it and *in*organic substances; resolves its particles into their ultimate elements, and they can no longer be distinguished as having belonged to an organic body; they are essentially the same in all particulars as other inorganic matter which may never have formed part of an organism. If animal life be evolved in consequence, and during the progress, of this decay, we see no essential difference between it and the evolution of animal life from inorganic matter that, as we before said, may never have been organised. We are aware that an attempt to dispute a point of this nature with a gentleman of such unquestionable talent as Dr. Carpenter, will subject us to the charge of presumption; but we trust that a mere expression of our opinion will not be deemed unwarrantable or impertinent. The supposition of the *special creation* of men and animals rest entirely upon the authority of revelation; and it is clear that if it be unreasonable to believe in the special creation, *there must have been a time when animals and plants were produced by spontaneous generation*, unless we adopt the extraordinary hypothesis of some of the ancients, and believe that the germs of all organisms have existed from eternity.—*Ed.* of L. R.]

"The second question, however, is one to which there is much difficulty in replying satisfactorily; and it would, perhaps, be better to leave it without decision of any kind until more extended researches shall have furnished more positive data. Our belief that the new beings formed by the process of reproduction always closely resembles the parent stock, is certainly founded upon a limited induction from observations made upon the higher classes of plants and animals. Reasons have already been given for the opinion that the same germ may assume very dissimilar forms, according to the circumstances under which it is developed; and knowing as we do how readily the simpler classes of organised beings are affected by changes in their external condition, it is not difficult to admit the possibility of their forms being thus greatly modified, as well as the continued propagation of the varieties thus produced. Some very curious observations upon the reproductions of lichens support this view. The special reproductive particles which are formed in the shields of the higher species are capable of developing themselves into the same specific forms: *while the powdery matter of their surface, and of other individual parts of their structure, may separately exist in the condition of inferior species.* It appears very difficult, and indeed almost impossible, without some admission of this kind, to account for the production of parasitic plants and animals in the interior of others. *That their germs have been conveyed from without into the situations where they are developed, must be held as a very forced supposition, when it is considered that they are often much larger than the vessels by which they must have been transported; and that in many instances, the animals which produce them are not known to exist any where but in the living body.* Entozoa have been found even in eggs; they also appear in various diseased states of vegetables; and they seem to be normally produced in certain parts of mosses, &c. which have been supposed to be connected with the reproductive function. There is probably scarcely an animal in which parasites of this kind might not be discovered at some period of existence; and even the intestinal worms are themselves infested with entozoa of inferior species. It is often very difficult, moreover, to distinguish between a degeneration of structure, and a growth entirely new; and there are some forms which appear to connect the two. Thus, the single acephalocyst seems composed of nothing else than layers of condensed albumen; and differs in nothing, but its want of connexion with the surrounding parts, from the serous cysts which are morbid growths of no unfrequent occurrence in the animal body. And, on the other hand, the various forms of cancerous structure have been maintained, with some show of reason, to be of parasitic character. The difficulty of distinguishing in plants between diseased growths and new organisms have been already alluded to; and the appearance of certain apparently vegetable growths in the bodies of living animals adds to this difficulty.—[Allusion is here made to such instances as that of the vegetating wasp of the West Indies. The Insect (a species of polystrix) is infected, while alive, with a parastic fungus (allied to sphæria), which gradually increases so much in size as to destroy the life of the animal.] —Nor is such a hypothesis inconsistent

with what is known of the nutritive processes in their normal and abnormal condition. It has been shown that all the solid tissues of the body are formed from its alimentary fluids; and observation of diseased actions shows us that portions of these fluids *are capable of passing from an unorganised to an organised condition, by virtue of their inherent properties.* Now, although the new tissues thus formed usually become part of the general structure, by forming a connexion with those in their neighbourhood, *it is not difficult to suppose that a variation in this process might give rise to the production of a new individual of inferior form;* especially when we bear in mind how closely the nutritive and reproductive functions are united in the lowest groups of living beings. It may be reasonably concluded, then, that if there is not yet sufficient evidence for the establishment of such a hypothesis, there is at least enough to prevent us from rejecting it as altogether absurd or untenable."—(Principles of General and Comparative Physiology, by Dr. Wm. Carpenter, cap. xiii. "Reproduction of Organised Beings: general considerations," pp. 390 to 396.)

In relation to that part of Dr. Carpenter's remarks on parasitic fungi, it was stated by Mr. H. O. Stephens, in a paper which he read at the Literary and Philosophic Society of the Bristol Institution, March 13, 1845, on the "Parasitic Fungi which infest wheat and the other cerealia," that "He was rather inclined to consider the puccinia (mildew) as a *sign* of an unhealthy condition of the wheat plant, than as the *cause* of that condition; as in the analogous case of animals infested with parasitic insects, when exhausted by disease; in which case it was impossible to exterminate the insects until the animal was restored to health and condition again." Which clearly indicates that the parasitic plants and animals were generated during the process of decay or disease; and that their germs had not been previously introduced, for then they would have been the *cause* of the disease, and not the consequence of it.

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(5) "It is well known that many animals have useless parts. Such are the nipples of the human male; the fifth claw in dogs; the callosities in the legs of horses; the bony projections on the ribs of the ostrich, which serve an important purpose in other birds, but in the ostrich are too short to be of use. Now, as it is impossible to impute imperfection to the divine contriver, and as those superfluities *would* imply imperfection, if each species were made by a separate act of power, the conclusion is hard to avoid, that they were not so made; but that these apparent imperfections are (as in the moral world) a necessary consequence of some general law, or agency, which has operated unbidden as to details. Next; particular animals are known to exist, a *separate origination* of which would be most difficult to reconcile with supreme benevolence. Who can conceive of a hideous worm created for the express purpose of gnawing the human bowels, and incapable of living elsewhere? of a fly, the instinct of which teaches it to lay its eggs in the brains of the sheep, to the exquisite torture of the innocent animal? If the foul creatures which eat up diseased bodies while still alive, attacked only the direst transgressors; if we could flatter ourselves that none but a Sulla or a Herod could fall a victim to these loathsome diseases; we might get some shuddering comfort in the thought of righteous retribution. But when it is most manifest that we are all exposed to these visitations, in common with the lower animals, solely because we are flesh and blood like them; it becomes all but impossible to believe that the creator had a moral object in creating, and did create by a separate act, every one of these torturing scourges.—[We would suggest for the consideration of the reader, that the difficulty in connexion with the existence of such creatures as are mentioned above is not *removed* by the supposition that they were *not created by a separate act* of the deity, but are "*a necessary consequence* of some general law, or agency" impressed upon matter by such deity. Whether the deity created all animals or some particular animals by separate acts; or whether he created matter with certain properties which were certain to produce particular animals, is a consideration of no consequence—he is equally the author of them in the one case as he would be in the other. If he be the author of certain laws or modes of operation, by which parasitic animals are produced under certain circumstances, the *time* when those laws first operate after their promulgation does not, in the minutest degree, affect their authorship and origin—whether it were a minute, an hour, or a million of years. Nothing is gained by the hypothesis: for the god of the universe is described as being the same "yesterday, to day, and for ever."—Ed. of L. R.]—But besides these special arguments tendered by the details of natural history, the mere catalogue of the numbers of plants, insects, and other animals, has great weight. As the Copernican system won belief by the contrast of its sublime simplicity to the inextricable complexity into which that of Ptolemy had grown; so when we read of the hundred thousand species of plants and animals by which this globe is peopled, the

eye accustomed to the analogies of the divine procedure, discerns that all these creatures must have come forth by the operation of law.....[Again, on the facts which seem to indicate a regular progression, the writer says]—The superfluous parts in many animals, to which allusion has already been made, are often of such a character as to betoken progress from an earlier, or towards a later, state, in the individual or in the species. From the mammæ of men, it is obvious to draw an inference that every male infant was (in some sense and degree) a female before it was a male. So, in the ostrich, a rudimentary bladder and diaphragm (organs wanting in other birds), with its feathers so similar to hair, denote a species of bird which is in a state of transition towards a beast: we further see, that the processes of bone on the ribs, which it ought to have as a bird, are beginning to drop off, now that it is preparing (as it were) to leave that class of animals. It cannot be denied that all such facts, which are very numerous, lie entirely in the direction of our author's hypothesis. Geology enlarges this argument. The fossil fishes of very early ages have various peculiarities now found only in embryos. This is regarded as a significant hint, that *species* in general have advanced according to a law analogous to that which is now discovered in the progress of the *individual fœtus* of the more perfect animal. If it be alleged that these geological facts are not numerous enough, and resting on a sufficiently broad basis, to justify the inference, we can at least lay stress on one widely-reaching and well-established historical principle, viz: that in the past ages of the world, even when *genera* existed which we can recognise as familiar, yet the *species* are diverse from those of recent days. The passage is so gradual towards the modern forms of animated life, as strongly to impress us with the idea, that every great change operating on our planet (in a long period of time) was attended with a gradual proportionate change in the species of animals."—(*Prospective Review.*)

(6) "This will suffice to put the reader in possession of the Author's view, which is distinct from the wild and rather ridiculous speculations of the celebrated Lamarck, in his believing the successive changes to depend solely on uterine development, under new stimuli, supplied by the changes which in length of time passed on the earth, of which he lays especial stress on light and purer atmosphere. Thus the successive formation of all the orders of existence harmoniously proceeded, *pari passuer*, with the alterations in the globe, according to a fixed plan eternally in the divine mind; and nothing is left to the capricious efforts of individuals, which are supposed by Lamarck to have greatly modified the form of species."—(*Ibid.*)

(7) "It is probable that a person who believes that a piece of flesh may, in its decomposition, generate worms or other small creatures, will not be very incredulous as to the production of strange insects by electric agency. Since in the former case no life or soul (in a metaphysical sense) can be imagined to be imparted by the decaying tissue to the embryo, organic forces *alone* are concerned in originating that life. That animal fabrics are made up of the same constituents as unorganised substances, is ascertained. Chemists no longer doubt that if they could unite certain inorganic elements in the right proportions, and under proper circumstances, they would be able to compose animal fluids: in fact, two important proximate principles of animals (urea and alantoin) can be made artificially. Although the blood has so many vital properties in it, that a great physiologist did not shrink to use the strong expression, that (when fresh from the body) it is *alive*; yet in the body it appears to construct or reconstruct solid parts by processes fundamentally chemical. Granted then that animal life (in its simple forms) does not necessarily spring from an individual similar to that which is generated, it seems as easy to admit that a *coral* as that a *crystal*, may be produced electrically. The popular difficulties on the subject are drawn from an inadvertent extension to all animals of what is known concerning the generation of the higher species; but when we treat of creatures which propagate by splitting their bodies, so that it can hardly be said which part is parent to the other, those analogies entirely fail. The author strengthens his opinion as to the origination of the humbiest living forms from electrical agencies, by appealing to facts which establish that the most cardinal process of vegetable and animal life—nutrition, of which reproduction is only a modified form—is fundamentally electric.....That the heart beats by electric impulse, has been surmised, says Sir J. Herschel, since a certain philosopher kept a ball pulsating in his study for twenty years together by similar artificial means. We must therefore rest in the belief that the vital powers are an application of electricity, at least provisionally, and until the contrary is shown. But if a presumption of truth rests on this side, then, combining all the other arguments, it seems that we have, not indeed a proof, yet an index to the first origin of life."—(*Ibid.*)—[The reader will have met with the ideas in this note before. It is introduced more for authority and support than for information; and as showing how generally the extraordinary hypo-

theses it contains are being adopted by the learned and intelligent.]

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(8) "A yet more interesting and important series of facts is appealed to by the author, in support of his hypothesis, viz: the changes which are undergone by animals in an embryo state. It is well ascertained, for instance, that the chief organs of a human child existed in a lower preparatory state in the early months of life; so that, with almost strict truth, it may be said, that each of us had the brain and heart of a fish first, then of a reptile, next of a bird, afterwards of a beast, and finally of a human being. Our author even carries the process through the tribes of the human race, alleging (but this appears not to be generally admitted) that we had the brain of an Ethiopian first; then of an American; at birth that of a Chinese; which only gradually assumed the true European form. Thus, in his view the varieties of the human race are all referable to *arrest of development*. The bearing of the general fact on the history of the world is put in a very striking light, by a table in which he compares, in parallel columns, the successive changes of the embryo human brain, as laid down in Fletcher's Rudiments of Physiology, with the succession of animal life, as set forth by geologists. At first sight, the analogy appears too perfect, and the argument too ingenious to be true; but on perusing the whole quotation from Dr. Fletcher, who is not writing to support an hypothesis, no room seems left for supposing that the facts have been tampered with; and the similarity of the two lines of progress distinctly indicates that a *common principle was at work* in the development of the animal species and in the growth of an individual human embryo." —(*Ibid.*)

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(9) "While we see great force in much that the author urges on this topic, we wish that he did not assume the appearance of underrating the mental gap which separates the brute from man. We do not say the gap is of such a nature as to affect the soundness of his conclusion; yet (in spite of his remark concerning human infancy) we think that it does exist. The power of education and *progress* in the highest of the brutes, soon reaches its limits; but we have every reason to believe that the very lowest human tribe might, in a few generations of cultivation, produce individuals who should compete in talents and genius, with a majority of the most favoured nations. Perhaps this may be hereafter accounted for. Even in the action of those forces which proceed by infinitesimal increase, critical stages occur at which the results are abrupt, and continuity is lost. As science advances with accelerated pace in its later stages, so may it be with the progress of the animal mind; and the human brain, once formed, may of necessity have so outrun in its after improvement any simultaneous advance of other animals, as to have made the gap wide and startling which was at first insensible. Again, the development of that peculiarly human quality *ambition*, giving rise to war, exceedingly tends to the extermination of every weaker and inferior human tribe by the more politic, inventive, and energetic. We see the process to this day going on, in extirpation of barbarians, by the side of the more civilised man. God forbid that we palliate the crime and the heartlessness with which this is generally accompanied. Still, when we consider the instinct with which wild animals destroy or drive away the weak and diseased, and the good general results to the species which are subserved; we cannot help suspecting that the savage instinct of war has been similarly overruled; although itself to be superseded by more humane and effectual dealing when the fulness of time is come. Perhaps this part of our author's argument admits of being strengthened by insisting more minutely on the phenomena of idiotey. Following out a line of thought which he has elsewhere urged—If a true human mother may bear an idiot daughter, there is nothing beyond the laws of physiology in an idiot mother producing a daughter with healthy brain. Now, if a tribe of men were found, all of them idiots, no one would think of urging that there was a great chasm between their minds and those of brutes. The human idiot, as we see him, is indeed painfully lower than a brute; but if a community of such beings can be conceived, it is not unreasonable to believe that many instincts would operate in them which are now suppressed, because the first wants of these unfortunates are supplied by the ministrations of others. That a race of idiots might be propagated, by circumstances of misery -- especially from darkness, impure air, and want of suitable food—we presume that all physiologists would admit. And as from the brute mind to that of the idiot, is hardly to be called a step upwards, so assuredly from the lowest idiot to the merely imbicile, and so on to the sound-minded, there is every shade of variation. But since, as has been hinted, an idiotic or imbicile race would almost infallibly be extirpated by savage neighbours, perhaps the non-appearance of such races in history is no reason why they should not be adduced as a possibility in the present argument."—(*Ibid.*)

(10) "The author endeavours to confirm his hypothesis by the Macleay System of animated nature; that is, the quinary or circular grouping of all orders, general species, &c. It would be presumptuous in us to call this fanciful: it may be all ultimately proved true. But at present, it is far from being sufficiently established itself to serve to confirm a great speculation *beyond*; and the whole bears so fantastic an air (which is aggravated by the strange nomenclature) as to injure, we apprehend, in the mind of most readers, the effect of the reasoning which it is meant to aid."—(*Ibid.*)

(11) "The latter chapters of the work are devoted to the early History of Mankind, the Mental Constitution of Animals, and the general moral and religious questions which the whole subject suggests. For the sake of his argument we cannot but regret the stress which he has here laid on the details of Gall's and Spurzheim's phrenology. That system has none of the external marks of true science, which are to be found in astronomy, physiology, or any of those sciences, on which we must look with reverence as established truth."—(*Ibid.*)

"The treatise ("Vestiges") which we have to examine and analyse is most engaging and interesting. We willingly accord to it all the attractions of novelty and ingenuity, the fascinations of beauty, the delights of theory. We readily attribute to it all the graces of the accomplished harlot. Her song is like the syren for its melody and attractive sweetness; she is clothed in scarlet, * and every kind of fancy work of dress and ornament; her step is grace, and lightness, and life; her laughter light, her every motion is musical. But she is a foul and filthy thing, whose touch is taint; whose breath is contamination; whose looks, and words, and thoughts will turn the spring of purity to a pest, of truth to lies, of life to death, of love to loathing. Such is philosophy without the maiden gem of truth and singleness of purpose; divorced from the sacred and ennobling rule and discipline of faith. Without this, philosophy is a wanton and deformed adultress."—(*Vestiges of Creation Exposed*, by S. R. Bosanquet, Esq.)

"Philosophy is the most subtle serpent that poisons and saps the spiritual mind, and fascinates the conscience. It rears its head with human front and voice, and syren sweetness of address and invitation; while other idols exhibit their bestial foulness to only ordinary discernment. It invites at once, by its most honied sweetness, to the most tasteful and to the bitterest fruit. Philosophy is the fruit of man's reason. The exercise of man's independent and unassisted reason is rationalism. Such philosophy and such reason are the foe to faith. Reason is man's empire: Faith is God's."—(*Ibid.*)

ERRATA.—In No. XV., p. 1, beginning of 4th line from bottom of col. 1, *add* "deaths to." P. 3, col. 1, *leave out* the last sentence of the paragraph, it is a duplicate of what follows (commencing "In this era."); col. 2, same page, 25th line from bottom; *mark out* the "s" before "parity." P. 7, col. 2, in the 13th line from bottom, for "confessed *by*," read "confessed*ly*."

* In allusion we presume to the colour of the binding of the "Vestiges."

NATURAL HISTORY OF THE CHERUBIM.

These Figures have been connected with the Divine administration, revelation, and worship, from the first development of the plan of redemption in the garden of Eden, to the period at which the Son of God became incarnate. Sacred history records their use in the brightest displays of providence, atonement, redemption, and grace. Whilst their hieroglyphic expression has created a great difference of opinion respecting their meaning.

The term Cherub is a compound Hebrew word, of which Cherubim is the plural; the same as the word *men* is the plural of *man*, in our tongue. We read that they were two in number, placed opposite to each other upon either end of the mercy seat. From the usage of the Hebrew language and the numeral annexed to it, we learn that there were only two within the vail of the Jewish sanctuary.

The form of the Cherubim consisted of the faces of a Bull, a Lion, an Eagle, and a Man, united to one body. Each cherub had two immense wings, one of which they extended from either end of the mercy seat, so as to meet in the centre, and thus completely to overshadow it.

The curtains of the Tabernacle were likewise ornamented with the Cherubim. The

form of these differed from those set up in the most holy place. The figures within the vail had three heads with four faces, those worked on the curtains had but one head with the united faces of the lion and the man.

It has been observed, that there is not any account of the form of the Cherubim having been communicated to Moses, nor delivered by him to the workmen who were employed to make them: that the Divine instruction of the artificers only related to *the manner of executing* the work, and by no means implied either *an ability or a right of inventing* any thing new; nevertheless, there are several sources from which he could have derived this information.

The form of these figures were first exhibited by God himself at the east of the garden of Eden, immediately after the fall of man, and with which the church *before* the flood* *must* have been well acquainted. It is likewise reasonable to *believe* that the Israelites possessed much information respecting the antediluvian world; for whether they were acquainted with letters or not, before the time of Moses, it is certain there were various methods of perpetuating the memory of important events. Noah *might* have long conversed with the man who had talked with Adam. Abraham *could easily* have discoursed with Shem, who was a pious son of Noah, and who *could not* have been ignorant of the Cherubic form at the east of the garden of Eden. The father of the faithful *could* have obtained from him much information respecting the religion and worship of the old world. This information Abraham *would* communicate to his son Isaac, and he to Jacob, who afterwards resided with his sons Joseph and Benjamin seventeen years in the land of Egypt. It *must* have been amongst the most entertaining and affecting parts of the life of the venerable patriarch to have informed his favourite sons of such things as related to the true worship of the God of Israel from the beginning of time, and in which the Cherubim had always been considered to have been a sacred symbol. *The Israelites had a Tabernacle before that which Moses set up in the wilderness*, and in which they adored their God during their continuance in Egypt, consequently *they could not* have been unacquainted with the form of these figures which had always been used as an indispensable emblem in Divine worship.

We read likewise, that God presented to Moses on Sinai, a complete pattern of the Tabernacle with its furniture, and which he was directed to imitate; so that if Moses *knew not the form* of the Cherubim at the time he ascended the mount, the shape of these figures being included in the pattern of the sacred furniture, he could have caused the model to be taken, that was placed in the holiest of all. Still I am inclined to the opinion that the silence of the Mosaic writings respecting the shape of the Cherubim *is to be attributed to that perfect acquaintance which the Israelites had of its form*, and which had been carefully conveyed to them from the beginning of time. The construction of these figures having been so well known to the Jewish people and to others, may be the reason that Moses wrote so short an account of the Cherubim placed at the east of Eden, *and the same reason may be assigned for the brevity of his history respecting the world before the flood.**....

The description of these figures is derived from the vision which Ezekiel had of them on the banks of the river Chebar, and which in the first chapter of his prophecies he stiles, "the likeness of four living creatures;" also, out of the midst thereof came the likeness of four living creatures, and this was their appearance; they had the likeness of a man. And every one had four faces, and every one had four wings. As for the likeness of their faces, they four had the face of a man, and the face of a lion on the right side, and they four had the face of an ox on the left side, they four also had the face of an eagle. Thus were their faces, and their wings were stretched upward, two wings of every one were joined one to another, and two covered their bodies." This vision was afterwards repeated, and the prophet in the tenth chapter of his book, not only declares the appearances of the living creatures in both visions *to be the same, but assigns to each the name of Cherubim.* "This is the living creature that I saw under the God of Israel by the river Chebar, and *I knew* that they were Cherubim." "Every one had four faces a piece, and every one had four wings. And the likeness of their faces was the same faces which I saw by the river of Chebar, their appearances and themselves." In this statement the prophet does not attribute his knowledge of the Cherubim to *any communication* made to him respecting them *at the time* of the visions, but expressly

* "From this it would appear that the Noachian deluge swept away all traces of the Garden of Eden, drowned the cherubim, and quenched the flaming sword."

* According to this worthy divine we shall be right in concluding that Moses wrote the *most* about that which he knew the *least*, and *vice versa*.—*Ed. of L. R.*

states that "*he knew* they were Cherubim," evidently implying his acquaintance with their form *before the time* of those visions in which he so distinctly beheld it.* The only place therefore, in which the prophet could have previously seen these figures, must have been in the Temple at Jerusalem, before the captivity, and which clearly proves the similarity of the form of the living creatures that appeared to him at the river Chebar, to that of the Cherubim upon the mercy seat. . . . The apostle John saw in a vision the form of the Cherubic figures corresponding to that which had previously appeared to the prophet.... If these emblems were first constructed by God himself at the east of the garden of Eden, renewed and placed for ages, in the Jewish sanctuary, exhibited under the past and present dispensations, it is unreasonable to suppose that they were used as *mere ornaments* in divine worship, and we are constrained to believe that they must have been of the most extensive expression.....

The Cherubim related to some *majestic order of being dwelling in the celestial world*, for their station was in the holy of holies, which sanctuary the apostle assures us *was a type of heaven*. We *know* but of three orders of beings inhabiting that sanctuary which is not made with hands. These are, Jehovah in the Trinity of Father, Son, and Holy Ghost. The Angels who kept their first estate. And glorified human spirits redeemed from among men. *To one of these orders, therefore, the Cherubim must have had an especial relation*..... The word Cherubim is from *Che, a note of likeness*, and from *Rubin, the Great Ones*, these being united, form the word *Cherubim*, which means the resemblance of majesty and glory, or the likeness of the great ones. . . . The Cherubim is stated to have been formed or beaten out of the same gold as that with which the mercy seat was constructed.....

In addition to the Cherubim constructed at either end of the mercy seat, the curtains of the tabernacle, and the walls of the temple, were embroidered and painted with these figures; which differed in a small degree from those set up in the most holy place. The Cherubim within the vail had three heads with four faces, those in the outer sanctuary had but one head with two faces, that of a lion, and the other the face of a man. . . . The Cherubim in the outer sanctuary were intersected with palm trees. These, on account of their lofty growth, their great fertility, and the perpetual flourishing of their leaves, were invariably used, both in the heathen world and the church of God [i. e. the Christian Church], as an emblem of victory. The trees divided the cherubs on the curtains and walls of the tabernacle and temple. . . . . Many objections have been made to this interpretation of the Cherubim. It has been considered *irreverent to represent the Deity by the emblems of animal forms*. There are, however, many other instances of this kind of illustration in the scriptures beside the Cherubic figures. Jehovah himself appeared in *the form of a man* to Abraham, on the plains of Mamre. The second person in the Godhead was typified *by the brazen serpent* set up in the wilderness. At the baptism of Christ, the Holy Ghost descended upon him in the *likeness of a dove*. And our Saviour himself is represented by the emblems of *a lion and a lamb*.

But an *especial reason* may be assigned for the use of those animal forms, in particular, with which these symbols were constructed. The learned Bryant in his Heathen Mythology, Abbé la Pluche in his History of the Heavens, Mr. Hutchinson in his Trinity of the Gentiles, and Dr. Spearman in his Literary Researches, have proved that the *animal* forms of the Cherubim were used from the earliest times, before letters were known, as the hieroglyphics of *fire, light, and air*; and which are *the three great material agents or ruling elements* of nature.....

The *four faces* with which the Cherubim were constructed, have been thought to have been at variance with the number of the sacred Trinity. The ground of this objection serves to prove the interpretation of the Cherubic figures to be correct. Although there were *four faces*, there were *but three heads* in these emblems, the bull, the lion, and the eagle; and it is to the head of the lion that the face of the man is joined, as representing Him, who in his divine nature, was the Lion of Judah, but who would, in the fulness of time, appear in the world as the offspring of David and the sacrifice for sin. The human face, in these figures, had not a separate head, as the bull, the lion, and the eagle had, because the

* It is clear from the above that the prophet was a very different man from Moses, for we here see him writing a particular description of animals with which he had long been very intimately acquainted, and that, too, for the information of parties as well acquainted with their forms and names as himself. Nevertheless, it is somewhat strange that Ezekiel should have been so precise in *describing* the cherubim, when the name alone would have been sufficient to have conveyed to the mind of the Israelites the form of the animal, if we take for granted that the Hebrews really did possess an intimate knowledge of such form, as our author states.—*Ed. of L. R.*

human nature of Christ is not a distinct person of itself in the Godhead, but is always represented in the scriptures as being united to the divine essence.....

When Cain was driven from *the faces* of the Cherubim, or from *the presence of the Lord*, it is probable that his guilt and his fears moved him to invent means to preserve his power over his offspring, so as to keep them about him; and no way so likely as by rearing *false* Cherubim. After Noah had pronounced a curse on his graceless son, it cannot be supposed that Ham remained with his brethren; but that, like Cain, he wandered to a distant part of the earth, and soon corrupted the worship of God, by introducing specious kinds of sacrifices and false cherubic representations. Ham was the grandfather of Nimrod, who was the person chiefly concerned in the erection of the pompous and idolatrous tower of Babel, the destruction of which declared it on this account to have been highly offensive to God, because it was equally opposed to his glory and worship. In like manner can be traced back the various idols which have swarmed in the heathen world, to something that has been divinely revealed; *but the perversion of such a revelation cannot form any reasonable objection to the perfectly wise and original medium of communication.*....

It is generally apprehended, that after our first parents had been driven from Paradise, God placed an angel with a flaming sword, to prevent the transgressors re-entering the garden to gather "the fruit of the tree of life." Such a comment is equally opposed to reason and revelation. If repulsion were the design of the Cherubim at Eden, it is reasonable to suppose that the east of the garden would not have been the *only* protected part, but that the north, the west, and the south points would have been likewise defended. If to prevent Adam from re-entering Paradise were the object for placing the Cherubim and the flaming sword there, this could easily have been effected by omnipotence, without the aid of an angelic sentinel with consuming fire, to deter a poor guilty condemned sinner from an approach to that garden, whose fears had just before influenced him to hide himself amongst its trees. Such an exposition reflects on the divine character; it represents him as performing an *unnecessary act*, by lavishing a miracle *for the sake* of its exhibition; for if the tree of life had remained in the garden after the man was expelled, it could only have been as a symbol, the eating of whose fruit could never have given immortality to the first transgressor, and, therefore, to have guarded it with such a design, would have been altogether useless.....

The best Hebrew critics have born their individual testimony to the correctness of the following translation of the text in the book of Genesis. "The Lord God drove out the man, and *inhabited at the east of the garden of Eden, Cherubim and the flaming sword rolling upon itself to keep the way of the tree of life.*"....

Were it practicable to produce all the names and images, insignia and emblems, ornaments and temples, altars and sacrifices, service and games, confessions, prayers and hymns, belonging to heathen gods and their idolatry, the language of the Bible might, in very numerous instances, be proved to be inspired, from the testimony of paganism, and we should find that much of the heathen religion had its rise from some corrupt notion of an original revelation.

Many of the ceremonies and observances of the Mosaic institution were appointed with the express design of exposing the idolatry of the pagan nations; that all rivalship between the Supreme Being and every thing which he had created, might cease; and that God alone might be acknowledged and worshipped as the Creator of the heavens and the earth.

Each of the miracles that Moses performed in Egypt previous to the departure of the Israelites, was levelled against some distinct Deity, to bring the idolatrous religion of that land into dire contempt, and to involve it in utter destruction. Such a stupendous scene of successive miracles was intended, and highly calculated, to prepare the minds of the Jews for the reception of the ten commandments from the mouth of God himself. Moses, therefore, after having "executed vengeance on all the gods of Egypt," in every form in which they had been worshipped in that land, he, as a delegated divinity, conducted his nation to the foot of Sinai to listen to the Almighty, saying "I am the Lord thy God that brought thee out of the land of Egypt, and out of the house of bondage; thou shalt have no other Gods but me."

The whole of the miracles performed after the people had departed from Horeb, were designed as impressive expositors of the first commandment of the decalogue, and were *intended* to deter the people from worshipping any Deity except the great Creator of all things. [The Deity was most signally deceived, if such were really his intention.]—(*Lecture on the Cherubim.* By the Rev. Thomas Roberts, Baptist Minister, King-street Bristol.)

A PAGE OF VARIETIES.

VOLTAIRE'S DEATH.—While in his last illness the clergy had come round him; and as all the philosophers of that period appear to have felt particularly anxious that no public stigma should be cast upon them by a refusal of Christian burial, they persuaded him to undergo confession and absolution. He had a few weeks before submitted to this ceremony, and professed to die in the Catholic faith, in which he was born—a ceremony which M. Condorcet may well say gave less edification to the devout than it did scandal to the free-thinkers. The curé (rector) of St. Sulpice had on this being related, made inquiry, and found the formula too general; he required the Abbé Gauthier, who had performed the office, to insist upon a more detailed profession of faith, else he should withhold the burial certificate. While this dispute was going on, the dying man recovered and put an end to it. On what proved his real death-bed, the curé came and insisted on a full confession. When the dying man had gone a certain length, he was required to subscribe to the doctrine of our Saviour's divinity. This roused his indignation, and he gave vent to it in an exclamation which at once put to flight all the doubts of the pious, and reconciled the Infidels to their patriarch. The certificate was refused, and he was buried in a somewhat clandestine, certainly hasty manner, at the Monastry of Scellières, of which his nephew was abbot. The bishop of the diocese (Troyes) hearing of the abbé's intention, dispatched a positive prohibition; but it arrived the day after the ceremony had taken place.—(Lives of Men of Letters and Science. *By Henry Lord Brougham.*)

BLASPHEMY.—It is evident that, strictly speaking, blasphemy can only be committed by a person who believes in the existence and the attributes of the Deity whom he impugns, either by ridicule or by reasoning. *An Atheist is wholly incapable of the crime.* When he heaps epithets of abuse on the Creator, or turns His attributes into ridicule, he is assailing or scoffing at an empty name—at a being who he believes to have no existence. In like manner, if a Deist, one who disbelieves in our Saviour being either the son of God, or sent by God as his prophet upon earth, shall argue against his miracles, or ridicule his mission or his person, *he commits no* blasphemy; for he firmly believes that Christ was a man like himself, and that he derived no authority from the Deity. *Both the Atheist and the Deist are free from all guilt of blasphemy,* that is, of all guilt towards the Deity or towards Christ.—(Lives of Men of Letters and Science, who flourished in the time of George III. *By Henry Lord Brougham.*) —Charles Southwell (Bristol), George Jacob Holyoake (Gloucester), and Thomas Paterson (Edinburgh), were imprisoned in 1843-4 for blasphemy, *they being Atheists.*

LIFE.—Life is a vortex, more or less rapid, more or less complex, whose direction is constant, and which ever bears along molecules of the same kind; but in which individual molecules are ever entering in and passing out, in such sort, that the *form* of the living body is more essential to it than its *matter.*—*Cuvier.*

PLEASURES OF SCIENCE.—For my own part (says Liebig) I confess that I felt my whole nervous system thrilling, as if pervaded by an electric current, when Wöhler and myself discovered that *wire acid* and all its products, by a simple supply of oxygen, became resolved into *carbonic acid* and *urea,* thus showing that there existed a connexion between urea and wire acid, such as had never before been dreamed of in its infinite simplicity, when our calculation proved that *allantoin,* the nitrogenous constituent of the urine of the fœtus of the cow, contains the elements of wire acid and urea; and when we succeeded in producing allantoin, with all its properties, from wire acid. Though few words passed between us in these investigations, how often have I seen the eyes of my friend glisten with delight.

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CHRISTIAN DOCTRINES AND MODERN SCIENCE.

(A Review of "The Christian Doctrines illustrated in their Historical Development and in Opposition with Modern Science." By Dr. D. F. Strauss.—From the *Foreign Quarterly Review*, of July, 1841.)

AMID the numerous works with which the inventive faculty of our German brethren has enriched us, none partakes of more singular features than the present production. It is the most untranslatable book that has yet appeared in that untranslatable language. We are not sorry for the circumstance, but possessing an instinctive horror of infidelity in any shape, rather rejoice in the circumstance, though it has increased our personal toil. Some notion of the difficulty of the work may be formed from the circumstance that one passage was shown to three distinguished native professors, all university men, and all declared their inefficiency to explain it. The work before us may be said to contain subtleties fully worthy of the reputation of the Society of the Jesuits, Spinoza's absurdest vagaries and speculations, with all the beautiful dreaminess of mistification, the heir-loom of the author's land, a little heightened by every thing that the Sophists and Platonists could lend to make light darkness, and the intelligible obscure. In it the author has at once and boldly thrown off the mask, and from the deist, which the Leben Jesu demonstrated him to be, he has by an easy mutation passed into the atheist. Still do we deeply regret that a mind of unquestionable power, an "esprit fort," in two senses, assuredly widely different from most of his class, to whom the term "esprit foible" is more applicable, should be induced to propagate the desolating dogmas of his book. This book, of course, is framed on the supposition that human reason is adequate to discover any thing, that man does not need any exterior aid, expressly denies any such communication, and is consequently opposed to all revelation, all systems of faith, all the world's hope in God. To divest all of this reliance, and to infuse into all his principles, is, of course, the author's design, and in it he has ruthlessly violated all that earth yet has ennobling and divine. We shall give an analysis of his work, and then proceed to a closer battle with him on particular sections, which we shall select to show the fallacy of his reasoning, his absurd trust in the extent of it, the inadequacy of this power in the discussion of the very questions which it is assumed competent to investigate, and trust that the issue of the whole will clearly advantage not the advocate of human reason, but of divine revelation. It is not a matter of deep difficulty to meet the rationalists on their own ground, since reason in her noblest exercise confirms revelation; but it were attempting too much with this weak weapon, were we to trust the whole issue of the question to it. It will do to use over a portion, but like the warrior's lance must give way in close combat to the keen and trenchant sword that divides asunder the joints and marrow, and pierces to the deep intensity of physical and mental union. The work of our author, is ingeniously arranged in the concatenation of causes as they arise from the subject-matter. . . .

Our author makes an ingenious but futile attempt to show the Mosaic history as inconsistent with itself. The account of creation in Genesis we are quite prepared to take in our author's words; namely, "that God produced of the waste and formless primitive matter, by a series of separations and developments, which were executed at his command, the actual world, in the multiplicity of its creatures and order of its laws." As for allegorical interpretations of creation, they are worth nothing, and we have nothing at the present period to do with any other interpretations of Scripture than our own; we are not bound to the dicta of the Fathers, though sound in many notions in which they differ absolutely from Dr. Strauss. We perfectly concede to him, that man divides his work into tasks, from the reaction of the matter against him; but what has this to do with God? If the fact of continuous creation implied labour or toil against the rebel matter, then would God not be, as He is, exhaustless yet, but would long since have exhibited failure of power. Has the Great Motor Agent of the planetary system waned one particle in His might since the hour of creation? Does Moses describe God as labouring under fatigue? "Let there be light, and there was light." Does that look like

weariness or labour to produce a desired end? Why even Longinus could teach superior deductions to this! The human race consists of a series of developments of creative agency over thousands of years. Does not this evidence that God produces over protracted periods His work? We allow it might, had God willed it, have burst into one development; but we can see no good reason why it should have been so produced, and can show abundant arguments to the contrary, in the earth requiring tillage to sustain such a population, the gradual increase of her sustentative power and active energy bringing in her deserts to blossom as the rose, and every waste and solitary spot to exult in the fertility given to it by God to meet the increased demand. We can trace nothing of inconsistency in the first and second chapter of Genesis. If Augustin or Dr. Strauss infer any inconsistency between the chapters, they are both in error.

If Origen also understood Gen. ii. 4, as contradicting the first chapter, he is equally in error, and we will show proof of the error of them all. "Augustin was surprised that the herbs, trees, and men, which had been created in the first chapter, are created again in the second chapter." Where did Augustin find creation reiterated? All creation is effected in the first chapter. The second chapter simply states the matter out of which the things were made. Gen. i. 26, contains the spiritual description of man; but Gen. ii. 7, his physical form, and how it became endued with life. Again, Gen. i. 24, contains the account of the creation of animals; but ii. 19, while it repeats how they were formed, contains the history of their naming by Adam; a fresh fact. What inconsistency is there in this? As to Origen's error, in the passage, Gen. ii. 4, "These are the generations of the heavens and the earth, when they were created in the *day* the Lord made the heavens;" nothing is easier explained, since the words in both the Greek and Hebrew, imply not simply a day, but time generally, and which sense our author himself admits in this very section, of which we get an instant illustration in Gen. ii. 17. Even Gesenius gives this sense, which is equally that of *Dies*. The passage then contains no contradiction to the preceding assertions, and is evidently simply a summary of them; and the word *generations*, in our version, is in the Greek and in the Hebrew text, *a history*, stating simply the character of the book of Genesis, placing this description of the work justly and properly after creation, and stating the intentions of the work to be to transmit a durable memorial of it. In the same manner Gen. ii. 21, is an amplification of the previous narrative in Gen. i. 27, and further explains the sequence of causes, that of time being maintained in the previous chapter. As to the distinction of day and night before the sun was created, Gen. i. 5, since God is described as creating the light from the primæval darkness, the alternation of the one or the other principle was the natural result, and no doubt the intention of God in the separation. The sun was afterwards made the treasury whence the light is diffused; but ere the creation of that luminous body, the alternation of day and night might easily proceed, and the sun afterwards sustain for ages the primal law. If light also consist, as is commonly supposed by the most accurate modern theory, of a series of vibrations of æther, it confirms the notion of Moses. Notion, do we say, the revelation made to him. We should be glad to be informed what other name even our author's ingenuity could have given to this, better calculated to express the fact in question to the intelligence of the general mind, than Moses has adopted by what has been perpetually submitted to the observation of mankind since that period. But our author does not stop here, and next assaults Mosaic truth on the grounds of its insonsistency with astronomy, geology, and criticism. With respect to the latter two, both sciences are in such a state of crudity that their decisions become impugned every fifty years; but astronomy has more fixity. We have, under the head of Astronomical Objections to Revelation, the old story, that the account of Moses favours the ancient system, which believed earth the centre of the system, and that the sun and plannets were created as subsidiary to the earth. Now, there appears nothing in astronomy to negative the Mosaic theory, that earth was created before the sun; on the contrary, the notion of Newton, who was really as competent as our author to discuss these matters, was very close in affinity to the Mosaic. In his letter to Bentley, he allows that matter might form itself into masses by the mere force of attraction.

"And thus," says he, "might the sun and fixed stars be formed, supposing the matter were of a lucid nature. But how the matter should divide itself into two sorts, and that part of it should fall down into one mass and make a sun; and the rest, which is fit to compose an opake body, should coalesce, not into one great body like the shining matter, but into many little ones; or if the sun at first were an opake body like the planets, or the planets lucid bodies like the sun, how he alone should be changed into a shining body whilst all they continue opake; or all they be changed into

opake ones while he continues unchanged, *I do not think explicable by mere natural causes, but am forced to ascribe it to the counsel and contrivance of a voluntary agent.*"

What in the history of creation, what in astronomy negatives the position of earth being created out of the common matter of the universe the first of the system; or what prevents the creation of the sun as a luminous body being simply all that Moses means? Moses, also, did not write the history of the system, he wrote only of one plannet; and he has simply to show, not the universal system, but such particulars out of it as concerned his subject, and he accordingly describes the offices rendered to earth by her chronometers, as our author calls them, the sun and moon. The tenden cy of his nation to sidereal worship showed the impress from distant worlds improper at the instant he wrote, that they were not disposed to attach too little but too much importance to the ætherial spheres around the earth. As to any argument being deducible from the fact that Moses described the progress of creation and cultivation of the earth as occupying five days, and the sun, moons, and stars as created in one, nothing can be more ridiculous than any attempt to found an argument on that point. What hinders our affirming that God then only made *them* luminous, which is all that Moses says? What sense does Dr. Strauss attach to the first verse of Genises? "In the beginning God created the *heavens* and the earth." What hinders the Hebrew word from expressing stellar matter? What does it mean, if this be not its meaning? The next point urged is, the inconsistency of the account of the creation with modern geology. It would, indeed, be difficulty, nay, impossible to get any constant quantity to fix this variable. Look at Lyell, Buckland, Kirby, Cuvier, are they agreed on a single postulate? Is chemistry herself in a state to enunciate propositions, when she is hourly modifying her assertions? and, surely, her progress to fixity is in vastly superior advance of geology, which requires wonderful requisites and uncommon powers to arrive at dogmas where so many sciences are required to form a just conclusion. We consider, and always have done, that creation was performed in the six days; and we think our author's argument, that the days in the account are limited to twenty-four hours expressly by the terms day and night, good; showing clearly that those commentators of the Buckland school, who extend creation over a period of ages, are wrong. But the insidious and artful observation, that if six days of creation in the first instance, appear too close for a Divine act, they are also too quick for a process of nature, we deny. The law of elements which are brought into operation, if left to itself, takes time for its accomplishment; and such a law is described as brought into operation, by the Great Motor Agent; but it is not a process of nature that is described, but it is the process of a vivifying life. When light burst forth, a day might disperse the waters under an ordinary ageney, for the presence of light presumes heat. As to the origin of Testacea, and their separation from Mammiferæ in a day, that does not appear under the agency employed inconsistent, for separation was instant on creation. And it is idle to assert, though it may have the aspect in the eyes of infidels like Dr. Strauss of begging the question, that the supernatural character of the Demiurgus is not to be taken into question. We are simply bound to show, that the Demiurgus does not act inconsistent with reason; but no divine would assert, nor even philosopher worthy of the name, that he does not operate in a manner that defies the low reasoning powers of man to investigate. The only attempt to make criticism bear upon the question before us, after its vaunted powers, is that the passages Gen. i. 1. ii. 4. and ii. 5, are inconsistent with each other, in which arguments we have already joined issue; and the baseless unproved assertion that the Book of Genesis is not all writen by Moses, together with a dark attempt at Mythos, which the stubborn author of the Pentateuch does not supply, but is as strait forward as he is clear, from the whole attack. Where was the Mythos when Moses turned to his people with this appeal? "Ask now of the days that are past, which were before thee, since the days that God created man upon the earth, and ask from one side of heaven unto the other, whether there hath been any such thing as this great thing is or hath been heard like it? Did ever people hear the voice of God speaking out of the midst of the fire as thou hast and live? Or hath God assayed to go and take him a nation from the midst of another nation by temptations, by signs, and by wonders, and by war, and by a stretched out arm, and by great terrors, according to all that the Lord your God did for you in Israel before your eyes?"—Deut. iv. 2. Did that look like one that could appeal to facts? Has his nation, his dark, sunk, mamon-spirited, degraded nation, denied him, or ministered unvarying testimony to his truth? A Mythos, such as the Mosaic, were a miracle in itself. We pass to chap. 46—"Creation out of nothing."

Our author makes an attempt, but it is extremely feeble throughout this chapter, to incorporate matter with God. His rea-

soning amounts to nothing more than curious speculation on matters which lie infinitely beyond the powers of human reason to reach, to investigate, to separate into elements, or to exhibit with any clearness. After quoting 2 Macc. vii. 28, and Wisdom xi. 17, and contrasting them with Gen i. 1, he comes to the conclusion that the latter writer does not affirm as to matter, whether the creating God found it ready, or created it also.

"To place matter, which he had only manufactured as Creator of the World, distinct from God, was not only most analogous to the common conception, which proceeds from the manner and custom in which men are wont to perform their works, but also in philosophy a similar Dualism became customary through Plato. The notion also had this advantage, that it served as a convenient outlet to unburthen God of the creation of evil in the world. Therefore the eldest Platonic fathers of the Church speak of a creation of the world out of formless matter, and Dualistic, Gnostic, and Manichæan teachers, as Hermogenes, placed with more certainty an eternal matter distinct from God. If in the latter relation there is involved the question of a God unable to vanquish the reaction of the bad matter, and therefore not absolute; if in the first, since the divine production is not a human one, the being bound to matter must be denied. A reproduction of all things out of his Being, appears also suitable to God. It is after this manner it has been supposed that the Son of God was produced; but in order to distinguish the world from him, and not to fall into the pantheistic emanatismus of the Alexandrian Gnostics and modern Platonists, it has been decided that the world was created neither out of a pre-existing matter, as men usually make their work, nor of the essence of God as the Son, but through the will of God out of nothing. *This nothing* ought not to indicate any matter, but on the contrary exclude such an idea. They distinguished, moreover, a *nihil negativum* and *privativum*, and, according to it, a *creatio prima*, and *secunda*. On the first day God produced of the mere nothing, or of the negatio omnis entitatis, the shapeless matter, out of which, as a primitive nothing, in the following days he made the world. The old philosophical objection against this theory, 'ex nihilo nihil fit,' was removed, it is true, by limiting it to the domain of the *final causalitas*. However, from all ages, the creation from nothing was a weightless definition for speculative thinkers. Scotus Erigena understood under the *nothing* out of which all things are produced the sublime depth of the Divine Being above all *final something*. J. Böhme considered the *real* nature of God as the matter out of which he has made all things, and afterwards the whole root of this supposition was destroyed by Spinozism; the new dogma, as far as it could proceed, has either sent away the terminus, or so explained it that the nothing ought only to indicate the side of the non-existence, which is always joined to the world in reproduction. In the Chaldee history of creation the positive to the nothing is not the divine essence, but the divine will; of which we shall treat in the following chapter."

In the above reasoning we throw out of the question at once all Platonic notions, and shall simply take up the Mosaic and Christian. Now, first of all, Moses in his cosmogony is quite clear from Ovid's errors; he describes God positively as making the matter of the heavens and earth, as the immaterial generator of substance. Jehovah did not find things in confusion as Ovid describes God, he made matter. Ovid describes God and nature as co-equal and co-eternal. It is not so in the writings of Moses. Unbelievers may give this generation of matter the name of a *weightless definition*, but it is absurd to assert that anything of perishable and fragile form can be God. We are aware that we shall be pressed with the Atomic Theory, with the individuality of every molecule, with its rigid character, with its indestructability in space. We have nothing to do with this. A character impressed on a palpable thing must be exterior to the thing. If the character be coeval with the thing, then must whatever gave that character have preceded the impressed object. Now the indestructibility of matter is the result of exterior action, and therefore the inferiority of matter in duration to its Maker is evident. Now nothing can be more absurd than that reasoning that expects of the derived all the properties in the underived. Can God make gods? No. Does this proceed from the incapacity of God? No. Incapacity consists in not doing what is capable of being done. But whoever heard of an incapacity to effect an impossibility? Who, but the school of Hegel and his pupil Strauss ever dreamt of treating the Son as produced, when the divinty of the Son is co-eternal with the Father, only different in mode? Moses asserts amply that matter was not with God from everlasting, but all matter, stellar, universal, earthly, generated by him. As for the stuff repeatedly uttered, "ex nihilo nihil fit," why should any sensible being trouble himself with that equivocation, for it is nothing more? A thing is not made of nothing when the product of an Almighty will. As for that absurd

distinction of a nihil negativum, and a nihil privativum, Hegel and Strauss are welcome to what they can make out of it. They are valueless terms. The negatio omnis entitatis we take as a fair statement of primordial condition, and fully concede that Moses speaks of such a state as a creatio prima, and of the generation of matter as a creatio secunda, which consists in forming from it individualities. But we have nothing in this view to do with matter as God or part of God. It must be held as aloof and wholly distinct from God, the positive matter, once the negative, and positive to sense only by the power of God. That this view stands any test, the vain battering of ages around the scheme of Berkeley, which has the basis of the Bible for it, leaving that scheme like a rock in ocean unmoved by the changing surge, will abundantly demonstrate. Infinite volition said, "Let there be light and there was light." The same volition has produced from an equally unpromising subject with darkness—the universe. We pass to chap. 47—"The Reason and Aim of the Creation."

In this chapter an effort is made to negative all views usually entertained of this subject, without substituting any that can be available to solve the problems which the author raises. We are first told that Moses drew from the Platonist system a baseless assertion. We are next informed that the aim of an absolute Being must be absolute. A dogma that cannot be true, unless we suppose all creatures equal to the author of them. A vegetable, on this principle, ought to be a man, but unluckily remains a vegetable; man the creator, but still he remains the creature. We are next informed that God required the world to realize unto him his own essence; so that, on this principle, a man could not be convinced he was a living being unless he had children. The next point mooted is, that God was not self-content until he had made the world; and therefore, according to the sense attempted to be fastened on creation by Spinoza, it was a work of chance. As if creation were not as much a faculty of God, as man's operation is of himself; as if accident could befal one, whose very absoluteness precludes it. Here Leibnitz is quoted, who vents the following unintelligible stuff: "When God will create something, a combat of infinitely many possibilities rises almost, as it were, in strife to approach realization; among which, that which unites in itself the most reality and perfection conquers and becomes realized by God." Si sic omnia dixisset, the contest between him and Newton had never been even debatable. Herder justly remarks on this, that dubitable reflecting and choosing cannot consist with God, that he is not as a meditative artist, who breaks his head projects, compares, rejects, and chooses. There can be no realm of possibility out of the power and will of God. Schelling is next introduced to strengthen the arguments with the assertion, that the most complete Being has already existed in the most complete manner, because in the real possession of the highest perfection he would not have had any reason to create and produce so many things by which he becomes less complete. So that, trying Schelling on a matter of fact, we come to this: the king that makes an edict (a Russian ukase is an excellent illustration), which is partially obeyed, demonstrates by it, not his power, but his weakness, supposing all his people had disobeyed him on the subject of the edict previously. The edict is no evidence of power but of privation of power. An emperor then, with his armies and state apparatus, is weaker than without them. Supposing him by their aid to conquer kingdoms, he is only demonstrating his weakness if he be not the conqueror of the world. And the originating God, in the multiplicities of his contrivances in the relative perfections of his creature, is not glorified unless he make them such that they be enabled to obscure his glory. J. Böhme next favours us with the following; this writer is highly in favour with Dr. Strauss, because the mystics give him vantage ground in disputation: "As now God has corporized together eternal natures (angels) out of himself, they ought not in the heavenly rank to be looked upon in the same character as God. No; they were not formed to this end as the figures (ideas), which by the qualifying the spirits of God as in the (eternal) nature disappeared again by the moving of the spirits, but the body of the angels was corporized together harder and more compact than God was in himself, and remained so that their light ought to shine brighter in their hardness." If our readers can understand this, they must be gifted with uncommon perspicuity; to us it appears impiety, united with unintelligibility. Again: "The Eternal Divinity would not be manifest to itself if God had not created creatures as angels and men, who understand the eternal inextricable chain, and how the birth of the light was in God." After the quotation of J. Böhme, modern theology receives from Dr. Strauss the compliment of affinity to this unsettled mystic, or madman. Hear that, shades of Michaelis, Marsh, Waterland, Bull, and Barrow! After this the inquiry is carried on to the relations of the Trinity. God is next represented, after Hegel, as nothing but an

abstract idea if not conceived of as Creator: "Without the world God is not God." If by *Welt*, in this passage, he means *world* or even *universe*, and would represent God as an abstract idea if either of these be removed, the idea is as impious as it is untrue. After having thus attempted, as he says, to get rid of such a reproach, as to teach an incomplete Divinity, who developed himself with time, he proceeds to Chapter 48, to examine, in illustration of his position, "Whether the Creation be Temporal or Eternal."

The arguments of this chapter are extremely ingenious, but nothing more; we shall however enter into an abstract of the important matter urged in it. The Mosaic narration, it is first assumed, simply places the creation of all things in the beginning, but does not state what was before this begining, which does not satisfy a German neologist. As God was before the world, he wants to be informed what took place in that unrevealed period. The theory of immense periods of time, Æons, Jerom's wild imagination here comes in for notice as well as animadversion. "We must suppose," says this Father, "an infinite series of centuries before the creation of the world, during which God the Father was alone with the Son and the Holy Ghost, and perhaps also the angels. Six thousand years of our world are not yet accomplished, he exclaims! How many eternities! What periods! What centuries coming forth one from another must have preceded!"

"This shallow admiration," says our author, "was soon succeeded by the notion why, if the creation of the world was something good, did God defer it so long. Why did your God, suddenly asked the Manichæan, conceive an idea of doing what he had not done through the whole eternity before? What did God do, demanded others, before he made heaven and earth? Did he repose and do nothing? Why then did he not continue his repose? Why did he introduce into his essence a change which destroys his eternity? The divine bounty, observed the philosophers, could never have been inactive any more than his power; but as he is now Creator and Lord, he must have been so from eternity, consequently he must have created and governed the world from eternity. As the co-existence (Nebeneinandersein) of infinite worlds in space was an Epicurean doctrine, so was the succession of infinitely many worlds in time an infinite change of expansion and contraction of the Divine Being, according to the Stoic doctrine of difference (Unterscheidungslehre)."

The Church has never been without her philosophing and dreamy-minded men, more Pagan-minded than Christian, and accordingly a capital use is made by our author of Origen, who asserts that God had made series after series of worlds, basing this assertion upon the creative and governing activity in the first instance, and secondly, that the transition from creation to non-creation must bring a change into the divine nature. Were this the fact, every child that is born might be pleaded as a change in the Godhead, as God becomes the God of another soul by reason of its birth. Origen is only right in the probable basis of his idea, which is clearly that creation is not accidental, but essential to the Godhead; though it is not apparent, even on that supposition, that its incessant excercise must follow. Practically we see it does not, since no new worlds rise visibly to sight, that is, to our limited experience; but theoretically Origen's position is not clear.

We have next another speculative Father, Augustin, and he takes an illustration money and its uses to clear up the matter, but unsuccessfully. Scotus follows, and, with his usual rash assertions, states that God was one thing before he created, and a different thing after. But here Augustin draws a distinction between wish and will, much to the fancy of the schoolmen, but satisfactory to few others. Philo here intervenes with a definition of time widely different from Locke, and falsely states that time could not exist before creation. Augustin works upon this, and makes out that the world was created, not *in* the time, but *with* the time. The following assertion is then made:—

"It is a mere deceit to imagine that we can fix a point in the divine eternity, from which the world begins, whilst on the other side lays the pure eternity. Such a point makes that which is before or behind temporal; for in eternity there is no fixed point from which a begining could depart."

How completely all this fails when we consider, first, that time enters into eternity. How does this affect angelic existence? Would not that be from a point? Man, again, we can conceive becoming immortal; yet this is something before a man. To talk of fixed points in eternity involves only a contradiction of terms. We might as well speak of the eternity of time. Great praise is next given to Augustin for the elimination of a timeless causality. This Father represents the creature as one by God eternally, but governed, only differing in one point from the eternity of God, the governing principle, but in its infinite temporality approaching that eternity. God, though thus never without creatures, yet is always before them in priority, not through

a preceding time, but by virtue of his eternity. Scotus Erigena draws the distinction that God preceded the world, not according to time, but according to causality. Spinoza distinguished between æternitas and duratio. Kant drew here a line between the thing and apparitions from it. Schelling says, "it is necessary that if the infinite be the infinite, it must also be inseparable from it in the higher unity of the Eternal. The whole universe is nothing else but the affirmation with which God affirms himself. Take away the whole or its component parts, of which the infinite affirmation and eternal uniting in one is the nature of the substance, or imagine it now annihilated before any time whatsoever, and you annihilate the substance itself, as you carry away the circumference, with this the centre, and with both the circle itself, if you efface the single points of the first. If the world had ever begun to be, we should maintain that existence (being) does not proceed from the essence of God, viz. the idea of God must be done away. For this existence, that is precisely this *all*, follows precisely as essentially from the idea of God as from the idea of a triangle, that its angles together are equal to two right angles." If this reasoning displeases Strauss, as it does, it assuredly could satisfy no one of anything more than Schelling's personal presumption. Any attempt to class God and the universe under finite relations, any effort to clear this question by illustrations from the low science of quantity, must manifest the grossest folly and be accompanied with failure.

Our author places, in opposition to this, Erigena, who states that God and the world are not two different subjects, but one and the same. Every existence can be regarded at the same time as eternal and created in so far as God creates in everything *himself*. Nothing can be more absurd than Erigena in this and numerous other passages, which clearly are Pantheistic. Schelling follows again :—

"God and All are quite equal ideas. God is immediately, by virtue of his idea, the infinite (unlimited) position of himself, *Absolute All*, not a different Being from this self-affirmation, but by virtue of his essence the infinite affirmation of himself. the All is not different from Him. As every whole can be considered sometimes in the mutual connection of all its parts, sometimes in its freedom and pure unity, but in fact, always remains the same whole, so is also the nature of the free, viz. of the creating substance mingled, being not the casual, but essential complement, as with the body the shadow. That *All* equal to God is not only the *natura naturata*, but the speaking *natura naturans*; not the created, but the creating itself, and revealing by infinite ways."

As for this learned stuff and mysticism, in the first place, we deny God and All to be either the same or an equal idea. Schelling himself has overturned this idea in the previous quotation; for since he asserts the affirmation of a man to be distinct from a man, the affirmation of God is distinct from God. The world is the affirmation of God, therefore the world is not God. For here the difference in degree makes no difference in the fact. Who can understand *natura naturata* and *natura naturans*, terms that involve in them all the shiftiness of position desirable for the neologist, and out of which any thing can be made or apparently proved? Let us look at them without the dark medium in which they are involved, in the broad light of common sense. A *natured nature* and a *naturing nature*. The first is intended to convey the idea of *created*, we presume, and the latter of the *Creator*. The terms would be perfectly intelligible if they implied created nature and creating nature. Though this latter term would look rather atheistic in character, since nature does no imply intelligence, but blind action of causes. We have then the assertion, that created nature is creating nature, that is, that the thing made, made itself. No one can get rid of this absurdity who adheres to Schelling's definition, or to Spinoza, of whom he was then but the expositor, though woundrously altered by royal favour in after periods. This monstrous matter-God system crumbles to earth on the faintest blow, even from reason; we shall soon deal with it on the ground of revelation, though reason alone is amply adequate to demolish every one of these aërial castles. It is to Spinoza that the doctrine of an eternal world owes its revival; its perpetuity in modern times is the work of Schelling, Sehleiermacher and others, and it forms the essential basis, as Strauss owns, of the speculative theology. Here also Fichte comes into the field, and unluckily he had designated it *the fundamental error of all false metaphysics*.

We care little for the deductions of this science; we have always regarded Fichte as immensely overrated; and we place metaphysics of that character at just the worth of the deductions that are valuable, and these we find wondrous few. Fichte, however, represents the idea of creation within intelligible limits, which neither Schelling, Schleiermacher, nor Strauss, succeed in doing. He shows us what he means, the others have not yet arrived at the clear

elimination of their sense of it, if they have any just sense of it. His system represents God anterior to, and abstracted from, creation. This is the scriptural view of the All-mighty. Fichte compares God in the production of the world, to an author resolved to compose a book. The world is the idea of God, in operation distinct from God. But on the system of the new philosophy, the world falls into the progress of completion in the same manner as in the human process of organic growth. In this idea, however, they do not affect to represent God as incomplete (though they do so), and only with time attaining perfection, but as from eternity ready and perfect, but only thus because and in so far as he has created and creates from eternity. His eternal entrance into himself, his conditionate "bedings" by his eternal outpouring from himself. This idea is clearly intended to supersede that of the Church, of a beginning to all that is. It carries on the idea of creation into conversation only from everlasting; and of course it must be thrown out by every candid inquirer, first, from its want of intelligibility; next from its absurdity, when it is intelligible; thirdly, from its contradiction to universal notions of God; and, lastly, by the believer from its total opposition to revealed truth, which constantly speaks of the creation of matter by God, and of the generation of all existing things from the pure will of a great First Cause, wholly independent of them, and only generating them to increase the revelation of Himself, and to sublime nature under All-mighty influences.

The next head we have to consider consists of what our author terms *Productions of the Divine Creative Activity, principal Creatures and their primitive Conditions.* Among these, at Chap. 49, he begins with "The Angels." After a statement that the Church, from Col. i. 16, inferred the creation of angels by the Son, and referring to the words in the Apostle's Creed, "Maker of heaven and earth," and slily insinuating that this not being deemed sufficiently explicit, the words were added to the Nicene, and of all things visible and invisible," he proceeds to investigate the varied offices of angelic ministration. In this he shows a wide and extended acquaintance with Scripture, and little could be added to his description. It is only unfair where the book of Tobit is introduced, as an equal exponent of the system with the canonical books. This suited however his purpose, because if he could with a strong system involve some weaker principles, and then attack through them the strong, the effect at the onset would appear the mightier, and lead many unskilled persons to imagine that all was equally weakened in its solid strength.

The instance from Tob. xii. 19, marks, however, the wisdom of the Church in her rejection of that book; for the angel is there represented as affirming that he had eaten only in appearance. This equivocation, this hypocritical semblance of action, which negatives the whole conduct of angels in other portions of Scripture, amply demonstrates by the circumstance the apocryphal character of the book. Equally erroneous is the passage in Tob. xii. 15, on which the Church of Rome, whose strength is in the Apocrypha, places much weight, and also justifies prayers for the dead from 2 Macc. xii. 44. In the above-quoted passage from Tobit, the seven chief angels are represented as having assigned to them the service of carrying before God the prayers of the pious. The next point stated is, that the angels are not sexual on the authority of Matt. xxii. 30; though an attempt is made to discredit the words of Jesus, by the collation of Gen. vi. 2, and 1 Cor. xi. 10. An attempt is next made, similar to the artful efforts in the Leben Jesu, to insinuate the notion that the idea and office of angel has been gradually spiritualizing to its present perfection; but let any one read the instance of the angel who appeared to Manoah, and rose unhurt amid the altar flame, and then say whether modern refinement of images has produced the present angelic conceptions. Calvin's sceptical notions on this subject, who was, after all, a religious romancer more than a divine, are of course used to throw general discredit on the angelic system. A hope is then expressed that the angel idea will vanish with time, under which (though we are ignorant of these changes save in Schleiermacher's wild brain, and a few others) it has now become totally distinct from the primary notion. To us it only appears that the question has been freed from the imaginative process of man under the Romish Church, and confined to the strict statements of the Bible; which fact rather shows the value attached to the idea, and the anxiety to possess it pure and undefiled. We think our author in the next statement has done good in declaring that there is no proof that meteors, lightning, thunder, or earthquake, or accidents of human life, are to be ascribed to their agency. The idea is, however, derived from their past agency, in which these beings have been thus occupied on special occasions; but we are certainly not authorized in viewing them now as the immediate agents of these operations of God, although the idea is harmless. Next, however, follows the relation of angels to God, where

our author flatters himself that the system of Copernicus destroys the assigned locality of angels by the throne of God, "since the sky is no more a stratum, either above or round the earth, which formed the limits between the sensual and transcendental world, since, by virtue of the immense extension of the first, the latter must be looked for beyond, but in the first, consequently, God even cannot be otherwise above the stars than in and upon them." A magnificent passage from Daniel will soon settle that question of a local Deity, of which all this is the obvious inference:

"I beheld till the thrones were cast down, and the Ancient of Days did sit, whose garment was white as the snow, and the hair of his head like the pure wool. His throne was like the fiery flame, and his wheels as burning fire. A fiery stream issued and came forth from before him; thousand thousands administered unto him, and myriads of myriads stood before him: the judgment was set, and the books were opened."—Dan. vii. 9, 10.

Now who sees in this a local Divinity, who sees in it a material God? Earthly dominion had past and the Ancient of Days did sit, a figure descriptive of God's Majesty—His robe of snow of the purity of God—the hair, like the Saviour's in the transfiguration, flooded with light — one clear unspotted brightness clothed with light his created agent as a garment—the throne of fiery flame marking the pure spirituality of the throne-filler—one enthroned on that which is death to material things—the throne not stationary, but with wheels, marking his ubiquity and that the seat of his dominion is everywhere—matter annihilated before his presence, countless spirits ministering around him, and myriads of myriads of men awaiting final doom—does any thing in this invalidate the Copernican system? Again, the description of the Christ ascending to Heaven: "He that descended is the same that ascended, that he might *fill all things*." —Ephesians iv. 10. Is space, after all, requisite for the development of God? Is he not developed in minimis ut in maximis? As mighty in the smallest of the infusoria as in the mammoth? Could he not, as was declared by an eccentric preacher in reply to the question of where Hell was, crowd the souls of the doomed into a nutshell? Does immateriality require space? Strauss fails in even his own weak mortal philosophy, when he thus attempts to argue and bring space into such a question as this. As for Schleiermacher we look on this man as the pregnant source through his beautiful style of the rankest heresy on this subject and the eternity of matter. The Copernican system negatives nothing connected with angelic ministrations, it only adds to the belief in ascending nature as natural history points to descending gradations. The very laws of heat, the very proximity of planets to the sun, or their motion in the chill stilliness of the distant Herschel, indicate existence varying from mortal—beings capable, like the angel before Manoah, of soaring amid flame, or, from their peculiar constitution, enduring equal extremities of cold. The theory, then, of links in creation from man down to the zoophyte, and upwards from him to the great cumulative point of life, so far from being shattered by modern science, rises in tenfold power; and shows that, what could not have been anticipated at the time of its revelation by any of the sons of earth, the angel state, is borne out by all existing probabilities from analogical examination.

We pass to the second class of the productions of the divine creative activity—men. Chap. 50. "The first Created Pair." Few are the subjects on which we could have met our author with deeper disgust, mingled with contempt for his reasoning, than on that which constitutes the present chapter. He first attacks the name of Adam, deriving it from Adamah, earth, considering this derivation a mythos. If such be the derivation of Adam, what is there mythical in it? Is man not earth? Are not his very bones calx? Could a more appropriate appellation than the Hebrew name be given to him and Eve? We are not bound to show that this is the derivation of the name which is applied to both him and Eve, but as the Bible asserts that man was made of the earth, we might reasonably expect to find in him the elements of his world. And is this realized by facts or the contrary? Are any of the race different; do they not all demonstrate that they are dust? And do they not daily return to dust? The formation of Eve is next stated as a destruction of former organism, being formed out of the man. Has not this principle been amply borne out by the creative operations since her formation? Look at the great law of organism wherever apparent; does it not pass invariably, when removed from one body, to the sustentation or form of another? The very human mould from which we reap our daily bread, is only man's substance differently modified. The destruction of life for the sustentation of life is a clear principle in the inscrutable agency of God; but here the life of Adam was not sacrificed. He could not have children by what was alien to himself; a portion of his own nature was adapted for that object, and the fact of Eve being thus

akin, leads to the affectionate words, "This is now bone of my bone, and flesh of my flesh; she shall be called woman (*Isha*), because she was taken out of man (*Ish*). The argument to be drawn from this early similarity of substance—the oneness of nature—for the affectionate intercourse of the sexes for ever, is as grand, as its effect has been permanent, in the holy connubial tie. The unwearying sophist whom we are reviewing next tries to negative the derivation of all men from a single pair. The races of earth are feebly attempted to be shown distinct in organism, and any such facts as the pressing of the child's head into a peculiar development, from which diversity of strain might be argued in remote ages, or the positive influence of diet and climate; any thing so positive, for example, as a colony of Black Jews; all these things are carefully kept in oblivion, and the universal tradition of all from one pair equally unheeded. Kant asserted that the difference of the negro from the rest of the world, arose from the germ in the original negro race. However absurd Kant may be in his germs of men, we shall soon see that Strauss is absurder still in his germs of earth. The next point urged is, that the different races in varied and distant parts of earth preclude the possibility of a common origin.

We think it may be shown, without much difficulty, that ancient ship building and navigation were in a far more advanced state at an early period of the world, than either Strauss or any of his school appear to imagine. Independent of which question, Behring's Straits suggest no very formidable difficulties to the peopling of America, especially if the theory, which appears borne out by the fossil remains, of a change of climate be true, in which case the northern regions possessed sufficient heat to enable the tropical animals to subsist there. But let us look at our author's theory, which ought to be simple and clear, and unincumbered with any of these difficulties, otherwise we gain no advantage from its adoption. It is to our utter astonishment the Autochthonic.

"God has not created man as such a one, or quatenus infinitus est, sed quatenus per elementa nascentis telluris explicatur." This is the opinion which lays at the basis of the old traditions of Autochthon, which was devised by the Greek and Roman philosophers, and was opposed by the Fathers of the Church with the greatest violence, but it became the unanimous doctrine of natural history and philosophy. Thus all organic beings are originally produced by the unorganic matter. As to our planet, there is no doubt that it has acquired its actual state only by degrees, that it was in the original (primitive) time uninhabitable by organic beings, and that all those (organic beings) originated by degrees, without having parents, consequently by an heterogeneous production. To judge after this and other facts, our planet possessed, in those times, an abundant productive power, which, though now limited in the extent of its expressions, continues to act to the conserving of the created, executing (mediating), the continuance of more important organic forms only by propagation. It was principally the liquid element, but not such as it is now, but mixed with the vital germs which it has now separated from itself, which under the influence of a milder temperature of the original time has put forth from itself gradually at first the germs of the lower organisms, then the higher, and lastly, after a longer preparation of mixtures and divisions, also the germ of the human organism. The objection against this theory is easy. Why does not such production continue? If nature, observed Reimarus, could effect it once, we should even now see formations here and there in the fat slime by the heat of the sun, half or entirely formed, shaped or unshaped, known or unknown, ancient or modern. Lucretius, speaking about the different periods of the earth, has already observed that we cannot come to any conclusion about the youth of the departing from the sterility of its age, and the actual natural history agrees with him. Schelling has observed, with still more sagacity, that the unorganic matter which now lies before us, and whose impotence of productive organism forms the objection, is no longer joined with the same, out of which we affirm human beings to have come forth originally, for it is rather that part of the earth which cannot become animal or plant, or metamorphose itself to the point where it turned organic. Thus it is the residue of the organic metamorphoses. However, it is not even true that this production of organism does not occur. Reimarus saw well what a powerful support the theory has in the generatio æquivoca of the lowest animals, which became probable from the discoveries of Buffon, Needham, &c. Consequently he denied entirely the possibility of such a production of living beings, which argument is now no more feasible after so many experiments and observations, done with great care. But it is incontestable that it continues to form living beings, partly of unorganic and partly of quite heterogeneous organic matter, under certain circumstances, as the infusoria, the entozoa in the animal body. However, they will not accept any conclusion from this small and low organism, upon the high-

est, the human. But worms twenty feet long are not small animals, nor is the structure of the intestinal worms in general, and the infusoria, so artless (simple), when the one is anatomised by Brewer, and the other by Ehrenberg. The first lay, partly eggs, partly produce living young ones, and though the first exemplars could only have formed themselves in each single animal by generatio æquivoca, precisely in the same manner we affirm did man. He appeared at first on earth through a heterogeneous production, upon which he now propagates himself by a sexual one. The immense difference which still remains between these animals and the higher organisms is by no means greater than the difference of the relation in which these insects have been produced formerly, from those in which now only the former come forth. The heterogeneous production is the disappearing after trembling (nachzittern) of a movement to the violent beginnings of which all organic life owes its commencement. But supposing man could have been produced in such a manner, how would he have been able to conserve himself, who without doubt did not appear as a full grown one? Shall we remove this objection by supposing, like Epicurus, milk to the earth? or like Oken imagine the first men coming out of their germ-case (Keimhälle) in which they developed themselves in the original sea, at first as two-years-old children, when they became capable to seek their food? Let us rather confess here, as we have done in the doctrine of the eternal creation, the insufficiency of our conception, but let us keep up more strictly the necessity of thinking with Lucretius—

'Nam neque de cœlo cecidisse animalia possunt;'

and that the origin of man can only be in the above mentioned manner. If we thus suppose the origin of man, namely, as a natural process, the production of certain physical conditions, I do not see why these conditions (a certain mixture of matters under certain relations of temperature, electricity, galvanism, &c.) should only happen once, and in one point of the globe, or only have produced one human couple. I think rather if such germs formed themselves once, they must, without doubt, to speak with Oken, have come forth in thousands. As a production of nature, man must have been produced under the type of nature, namely, in a multiplicity of instances, or in a number of germs, the least of which attain the aim of their creation, by which alone can be explained the prevention of destruction by accidents, and partly the population of the world by the different races."

Monboddo's ape did not reach this. His theory is far more reasonable, because he gets up to Strauss by a series of developments; but Strauss spurns all this, and generates his grass-hopper, Autochthon, on the instant. Absurdity has, however, this advantage, that it teaches us to appreciate truth. Let us go down with the entire argument. First, the theory is, that this creation is not on God's part, "quatenus infinitus, sed quatenus per elementa nascentis telluris explicatur." How does this realise the absolute deed from the absolute, if it be mediate creativeness? Their own weapons pierce the neologists. What natural history or philosophy, saving that of Hegel and Strauss, favours heterogeneous production? Where is the tradition of early creation of this character? Where is the proof of any such vis vitalis as is here ascribed to the earth? In what crucible were all organisms revolving ere they attained muscular formation? Reimarus is unanswerable. If it was done, why should it never be repeated? The argument of Lucretius on the sterility of earth now rests on nothing but his baseless assertion. Ovid, in all his metamorphoses, never represents man as distinct from man in production, although in the myth of Deucalon and Pyrrha the stones become men—but how? By human agency under a divine law. A very different case to the one before us; and further, the intention of Ovid to indicate man's earthly formation is perfectly apparent. But it is asserted, certainly somewhat hesitatingly, with all the misgiving of an indefensible position, that this production of organism does happen. The *generatio æquivoca* is appealed to, which is certainly very equivocal proof. There is nothing in this but a term —there *is* no spontaneous generation. The infusoria and entozoa are appealed to as proofs. Now these infinitesimals, infusoria, according to Spallanzani, fill the air with their germs or eggs, so that we swallow them, and imbibe them possibly at every inhalation.* Lamarck considered the infusoria as having no volition, as taking their food by absorption like plants, as being without any mouth or internal organ, in a word, as gelatinous masses, whose motions are determined not by their will, but by the action of the medium in which they move. Headless, eyeless, organless, nerveless, just the sort of insect required to make out his own theory and that of Strauss. But the pious and deeply sagacious Ehrenberg, who

* See note, from Dr. Carpenter, to the "Natural History of the Earth and its Inhabitants," Library of Reason, No. 17.

devoted ten years of his life to their investigation, found these insects extending in their habitat to 50° of longitude and 14° of latitude, at Dongola, in Africa, the Altai mountains in Asia, on Mount Sinai, in the Oasis of Ammon, and at the bottom of Siberian mines, in spots entirely destitute of light.

These insects possess a more complicated construction than other animals, therefore they cannot be the first link. They dwell in the blood and urine, in the tartar of the teeth, in vinegar, paste, sand, &c. Their minuteness is such that some are not 1-2000th part of a line in breadth, and yet they have organs, a mouth, and several stomachs. The impression made upon the mind of Ehrenberg by this study, has been deeply conducive to the piety as well as learning of that philosopher. The type, then, of these is not simple enough for the earliest formation, neither do they generate apparently different from other animals.

The entozoa are next quoted, and it shows how singularly different things affect different men. These are quoted by one of our most enlightened philosophers, and the author of a Bridgewater Treatise, as fearful reminiscences of a fall. But it is of course presumed by Strauss, that as the habitat of these is man, that here he has his stronghold of spontaneous generation, since they are all generated in human matter. But these animals are doubtless generated from our food, which, warmed by the heat of the intestines, produces, from almost imperceptible eggs, even the giant tape-worm. Why are not these found in other animals? Why do they lodge in man? Simply because they vary as the food varies. The other animals do not take man's aliment, do not inhale our various drinks; wine and porter are unknown to them, and consequently man has these peculiar organisations from his peculiar diet. These two points thus disposed of, we will heighten the argument for Strauss, by adducing the polypes. Now when a part of these animals is cut off, it instantly forms another, and as complete an animal as the one from which it has been severed. Will this serve the argument of Strauss, since it has a greater air of probability than any of his own? Not a whit, though the best illustrations of the argument, for it is a faculty with which God has endowed the polype. The illustrations fail, even supposing that we deigned to place the question of the noblest animal on a pari-passu process with the meanest. But the entozoa, according to Strauss, are both oviparous and viviparous.* We doubt this latter fact; still we will let it remain, for argument, undisputed.

The first exemplars, he says, could only have formed themselves in each living animal by *generatio equivoca*; and precisely in the same manner, we affirm, did man appear upon the earth through a heterogeneous production, which is now continued by a sexual. But here the *generatio equivoca* is not established, and therefore man cannot be said to be generated by that of which the author can furnish no type. But where is the proof that the immense difference between the entozoa and man equals, which it must, to make this argument perfect that between the ancient and modern relations of the earth. Why should such magical powers be attributed to the Nachsittern, as to throw out at once, without miraculous agency, the perfect species of men. Having thus indifferently generated the human race, we regret to say, that Strauss is as bad a nurse as parent. He has now to feed his child. Epicurus has suggested milk from the earth, a creation of cow trees or something similar we suppose, to support his spontaneous creation. (How wisely is all creation placed, not coeval with but anterior to man!) No that will not do, and Oken helps him out by a desperate plunge, supposing a two-year-old birth (while about it, why did he not say twenty); and at this period the children are to sustain themselves and go on to manhood. Poor things! How much did they grow in the first year? How much in the second? When did they begin to run? How much cold met in them? How much heat? How much moisture? Did the elements beg of each other loans to generate certain parts? How was the earth? Shaking all over. Poor children! Strauss fairly gives up the battle here:—"Let us rather confess, as we have done in the doctrine of the Eternal Creation, the insufficiency of our conceptions." Yes, but this confession comes somewhat late in the day. Before a man touches these solemn realities, he is bound to exhibit a scheme as perfect as that he seeks to displace; before he unsettles a hope of futurity, he must give, as Hume was required to furnish to his aged mother, some equivalent for that which he removes. We must get a certainty of being right,* and not be taken up to a stage of the journey, and then told that our guide

*And it might be added fissiparous, also, as they are generated by the parent splitting into pieces.—*Ed. of L. R.*

* This cuts both ways—If religion be certainly right, how comes it that it fails in the proof? And if the correctness of religion be not capable of proof, what right has the religionist to demand a demonstration of the truth of atheism? Religion, as the affirmer, is bound to prove *first.—Ed. of L. R.*

is useless. An, "*esprit fort*" must be *fort* throughout. He ought to have no weakness, who, like Spinoza and Strauss, can man his heart and say, that he not only imagines but understands the Eternity of the Godhead.

The self-sufficiency of these men is apparent at every line. Having thus, we repeat, proved an extremely indifferent parent to man, a still worse nurse, let us look at his universal relations in both capacities. Man, then, is the product of these physical conditions, and Strauss does not see why these conditions (a certain mixture of matter under some relation of temperature, electricity, &c.), should only happen once and only produce one couple. He believes that the germs developed themselves in thousands, and this he considers solves the question of the different races. Indeed, but we ought to have at least been told how much of them will make an European, how much an African, and how much a Malay. What a picture, the earth covered with this two-year-old assemblage! How did they get to talk? Did galvanism teach them? Did a series of electrical shocks bring out a language? Again, how were they all preserved in this state, if Strauss feels this difficulty of conserving one couple for the propagation of the species? For the present we close our labours with this author, but we have not done with him. His book reached us late from Germany. It is not easy to apprehend such a book even in our language, far less in German, which grows daily more unintelligible and involved in its reasoning processes. We understand this work of Strauss has given great offence to his brother *esprits forts*. The spirit of the *esprits foibles*, of a nation's common sense, he has experienced, in nearly the rising of an entire city to prevent his taking a chair he would have desecrated with his present opinions, though with just cultivation his powers might have advantaged himself and benefitted others. He has at least unwittingly done the world one kindness by developing himself so completely in the present production, that no one can hesitate in pronouning a verdict upon him. As literary men we do not covet restrictions on the press, but if ever a work deserved the suppression by the censor or custos morum, this does unquestionably. Fortunately, from the recondite nature of the topics, it will only circulate among those who can test the information it contains, and appreciate it at its value, which, if we were called on for an estimate, we should not place very high.

LETTER OF THE GRAND DALAI LAMA OF TIBET TO THE POPE, JULY 8, 1742.

THE Grand Lama of Tibet, Mi Vang, wrote the following letter to Father Horatius, a Carmelite missionary resident in his dominions, who had, by permission, stated in writing his objections to the religion of Tibet. The Lama undertook himself to answer the objections raised by the missionary, and to state his objections to the christian religion as expounded by the Carmelites. The original of this very curious letter is in the archives of the Propaganda at Rome, and was published by Father Horatius in his work on Tibet. It is also printed in the Alphabetum Tibetanum of Augustin Antonius Georgius, an Augustinian Eremite, who also had been a missionary in the Lama's dominions.

The Grand Dalai Lama is the king and incarnate deity of Tibet, the government of which is a sacerdotal theocracy. The people of this empire consider the reigning Lama really a God incarnate; he is worshipped morning and evening with prayer, hymns, incense, or other offerings. The ceremony takes place thus: the Lama comes forth on a balcony and stands behind a yellow curtain, which is so much elevated as to allow his worshippers to see his legs from the knee downwards. A chorus of three thousand monks, men who have dedicated themselves to the "more perfect or virgin state," then begin the service, and perform several chaunts to their divinity, in strophe (stanza) and antistrophe (the second stanza in every three), and in sounds exceedingly solemn and impressive. The Lama's sceptre is not hereditary; when the reigning divinity is dead, the priests, who in fact govern the whole empire in every department, go about the dominions to find some male child with the prescribed signs which they only can recognise: this child or boy they elect to the throne of their theocracy, and educate

him of course in most exact obedience to their system.

The Grand Lama, therefore, whose religion is that of Buddah, is, in fact, the Pope of the East; and indeed the perfection of adoration with which he his worshipped, is such as the Roman Popes have long been endeavouring, but in vain, to establish; they have long given out that they have the authority of God upon earth, and can do all things; but it is not yet supposed that they are real incarnations of the Deity.

In other respects, the Roman Catholics have derived a large portion of their system from Tibet, and to such an extent, as to make their missionaries perfectly amased with the resemblance. Father Georgius, in a very elaborate and learned treatise, undertakes to prove that the similitude has been effected by the craft of Satan, who has, in his malice, imparted some of the choicest ordinances of the papacy to the idolaters of Tibet, indeed, he tells us that till he hit upon this solution of the mystery, his mind was filled with inexpressible grief by the discoveries he was constantly making of the identity of the Tibetan and Roman Catholic practices. In his curious work on the alphabet of Tibet, he has given some pictures of the ceremonies of the country; and one of these engravings which represents a procession of monks and priests going to the Grand Lama, seems to be a most exact portraiture of a Roman Catholic procession, banners, holy water, canopies, rosaries, &c.

Letter of the Grand Lama to the Pope.

"I adore the Master Sciaka (1). I have comprehended your answer; in elucidating this matter, some doubtful things remain. The God who exists by himself, and in whom are all things (2), makes in creation men, spirits without eyes; he also makes ears without the power of hearing; and feet without the power of walking; he creates infirm persons; he makes persons without life, fevers also, and various sicknesses. Kings everywhere are suffering infinite causes of distress—men are seen without peace of the body. I cannot express all these things with my voice. And all animals extract the spirit (*i. e.* life), mutually from one another, the greater from the less, the strong from the weak. On every side there are infinite pains even to the spirit. The spirits of jithars, though they do not feed on material things, equally endure the greatest punishments. The infernal ones, condemned, dwell in the fire—on every side there are infinite torments, and the inhabitants feel the pain and the punishment.

"If the self-existing God is the Creator, it will come to pass that the self-existing God is without great mercy, inflicting punishments on some and bestowing good on others, and treating all men as if they were his intimates. On account of all this, that which you have proposed comes out not worthy of adoration (*i. e.* valueless).

"Again, the self-existing God destroys men with death, sending death upon the earth. Can any falsehood be spoken greater? or is there any falsehood greater than this falsehood of your legislator? (*i. e.* the author of the scriptures). Therefore, all evil is existing from sin. Besides, men when they commit more weighty offences, also transmigrate (3) into asses, goats, dogs, and other animals. The spirits of animals transmigrate in the same manner into men. Your legislator, who says that this does not so take place, says what is false: your legislator also is ignorant of occult magic. Those images (*i. e.* phantasms raised by magic), enter into love with women, but .....are you ignorant of this? Our learning is from heaven, and has no end, so there is no end to the kingdoms of the

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1 "Xaca, or Buddah."

2 The Lama here states the proposition of the Carmelite, "that the self-existing God creates everything," to which the Lama objects; because, if the self-existing God is the creator, then has he created evil, as we see by his making some men blind, others deaf, and others lame, &c. And then by generally looking at the world, such as the distress of kings and governors, and the universal unhappiness of man, which the Lama says was too great for him to express in words, as well as by the contension amongst animals, the distresses endured by spirits in invisible torments, it is evident that evil predominates—now, if the self-existent God created all things, he created all these evils, &c.

The fundamental doctrine of the Grand Lama's religion is that there are two distinct principles, the principle of good and the principle of evil, and that the *evil* principle is the creator. By this most ancient dogma they solve, in a certain way, the enigma of the origin of evil.

3 The Grand Lama objects that the Christian system is ignorant of the transmigration of souls, which he contends is the punishment of great wickedness. The souls of the wicked become, after the death of the body, the souls of degraded animals, and the souls of animals, in like manner, become the souls of men.

world. There are innumerable kingdoms of the world, and in all these our law is existing. There are four parts of the doctrine of your particular law (perhaps he means the four gospels), but you do not feel ashamed that it is in some kingdoms only. That the power of your law is able to recall to life, I do not believe. The power of calling to life belongs to the chief evil dæmons; and is equally the power of drugs (*i. e.* the medicaments and charms of the magicians) to raise the dead. But I do not in saying this wish to insult your God. All punishments proceed from sin, all felicities from actions of virtue. Therefore a man's own heart is the author of all punishments, on this account, therefore, if the heart be kept in the best state, all living things will not be afflicted (*i. e.* there will be general happiness).

"This, my writing, is to the Grand Lama of your kingdom (*i. e.* the Pope); entreat him to impart to me the argument of kindness, and to pray for me. In this part of Asia the laws that do not agree with this doctrine, are three hundred and sixty; of those laws, much the greater part are contrary the one to another.

"In the past, the present, the future—in these three times—I have not understood that there is a law better than ours. It is your happiness alone, O missionary, to hear the exalted name of our law.

"May the spirits that are contrary to this law be destroyed."

VARIETIES.

In a paper on the "Neutral Azotised Matters of Organised Bodies," by M. M. Dumas and Cahours, the authors state that in an "Essay on Philosophical Chemistry," by the former and M. Boussingault, it was laid down in principle, that albumen, caseine, and fibrine, exist *as such* in plants; that they pass, *ready formed*, into the bodies of herbivora, and through these into those of the carnivora; but that *plants alone have the power to fabricate these three products*, which animals afterwards appropriate, whether to assimilate or consume, according to the needs of their life; and further, in the same essay, it was held, that these same principles might be extended to *fatty bodies*, which, according to this doctrine, *originate wholly in* plants, and come to play in animals the part of matter for combustion, or to be temporarily laid up in the tissues. In the same essay the following table was given:—

THE VEGETABLE

Produces—neutral azotised matters
,, ,, fatty matters
,, ,, sugar, starch, gums
Decomposes—carbonic acid
,, ,, water
,, ,, ammoniacal salts
Extricates—oxygen
Absorbs—heat
,, ,, electricity
Is an apparatus of reduction
Is motionless

THE ANIMAL

Consumes—neutral azotised matters
,, ,, fatty matters
,, ,, sugar, starch, gums
Produces—carbonic acid
,, ,, water
,, ,, ammoniacal salts
Consumes—oxygen
Produces—heat
,, ,, electricity
Is an apparatus of oxidation
Is locomotive.

The existence of insects who live upon blood, according to an ancient tradition, was the consequence of a broken pledge by Noah; and Eulia, in his book of Travels, has given the following version of the story, as it was preserved in his time among a set of Kurds, who dwelt at the foot of Mount Sindshar: "When Noah's ark sprung a leak, by striking against a rock in the vicinity of Mount Sindshar, and Noah despaired altogether of safety, the serpent promised to keep him out of his mishap, if he would engage to feed him upon flesh after the deluge had subsided. Noah pledged himself to do so; and the serpent coiling himself up, drove his body into the fracture, and stopped the leak. When the pluvious element was appeased, and all were making their way out of the ark, the serpent insisted upon the fulfilment of the pledge he had received; but Noah *by Gabriel's advice*, committed the pledge to the flames, and scattered the ashes in the air, there arose of them flies, fleas, lice, bugs, and such sorts of vermin as prey upon human blood, and in this manner was Noah's pledge redeemed."

THEOLOGICAL CURIOSITY.—The following *prayer* was delivered by a clergyman at the laying of the foundation-stone

of the *Barracks* at Horfield, near Bristol, June 3, 1845:—

"Oh! thou Almighty Architect of the Universe! Giver of all good gifts, who knowest our wants before we ask, and our ignorance in asking, *vouchsafe thy blessing upon this work in which we are now engaged;* and grant that whilst we take due precaution to preserve proper subordination in this our favoured land, it may please thee of thy goodness to avert from us the horrors of war, and of civil commotion; and that as we now pour upon this stone thy gifts of corn, wine, and oil, so many Agricultural, Trade, and Commerce, diffuse their blessings among us; and whilst we thus pray that the principles of brotherly love may have their visible effects upon the community at large, we would humbly beseech thee to bless our Sovereign Lady Queen Victoria, the Prince Albert, Albert Prince of Wales, the Queen Dowager, and all the Royal Family; endue them with thy Holy Spirit, enrich them with thy heavenly grace, and prosper them with all happiness. Let thy wisdom be their guide, and let thine arm strengthen them, let justice, truth, and holiness flourish in their days, and grant that all of us, building on the immoveable basis of Faith, Hope, and Charity, may so practice among ourselves the virtues of loving kindness, mutual forbearance, and concord, that in the present state we may live in tranquillity, unity, and peace, and in the future be received into houses not made with hands, eternal in the Heavens.—So mote it be."

Mr. Disraeli on Theology.—In all these church discussions we are apt to forget that the second Testament is avowedly only a supplement. Jehovah-Jesus came to complete the law and the prophets. Christianity is completed Judaism, or it is nothing. Christianity is incomprehensible without Judaism, as Judaism is incomplete without Christianity. What has Rome to do with its completion; what with its commencement? The law was not thundered forth from the capitolian mount; the divine atonement was not fulfilled upon Mons Sacer. No: the order of our priesthood comes directly from Jehovah; and the forms and ceremonies of his church are the regulations of his supreme intelligence. .....I do not bow to the necessity of a visible head in a defined locality; but were I to seek for such, it would not be at Rome. I cannot discover in its history, however memorable, any testimony of a mission so sublime. When omnipotence deigned to be incarnate, the Ineffable Word did not select a Roman frame. The prophets were not Romans; the apostles were not Romans; she who was blessed above women, I never heard she was a Roman maiden. No; I should look for a land more distant than Italy, to a city more sacred even than Rome.—*Sybil.*

There has been a fresh shock of earthquake at Mexico, three days after the destructive one of the 7th of April, which we have already announced. It has been less mischievous in its effects than the first, but has greatly increased the terror of the inhabitants, and many families have abandoned the city. Government had, however, at the last advices, found a cure at once for the panic and its cause. The Virgin *de los Remedios*, whose chapel is four leagues distant from Mexico, had been invited into the city, received there with great pomp by the clergy, and followed by the people with cries for mercy. Since the capital was placed under her protection there has been no new convulsion; and the multitude are quite satisfied of her relation to that effect, and at rest, therefore, under the shadow of her presence. The two shocks have been felt throughout the whole of Mexico, excepting at Guanoxuato, Zacatecas, Real-del-Monte, and a few elevated positions which seem to belong to a different zone of ground. In a place called *Valle de Rio Blanco* the earth opened, leaving a gulph whose depth has not yet been sounded, but whose mouth is 38 feet long by 13 wide. Sixty persons were swallowed into its chasm;—and many other localities have suffered severely.—*Atheneum.*

A Fact.—Perhaps there is no part of the East more dangerous to travellers, by encountering robbers, than the track from Jerusalem to Jericho, "the wildest of the wild," and it is the same as at the period of the Samaritan and the Levite, "who passed that way." At the extremity, overlooking Jericho, stands the high mountain of Quarantana, overlooking a most extensive plain, with the Jordan and Dead Sea, and in the back-ground those lofty mountains of Pisgah, Nebo, and others, and the view is prodigiously grand. *It was to the summit of Quarantana to which our Saviour, after his baptism in Jordan, had been led by the Tempter*, and fasted 40 days and nights; after whose example Christians have recourse to contiguous caves during Lent, and observe rigid abstinence and devotion. —*Dr. Rae Wilson.*

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LYELL'S DIGEST OF
LAMARCK'S THEORY OF THE TRANSMUTATION OF SPECIES.

[A CONSIDERABLE amount of obloquy, censure, and ridicule have been heaped upon Lamarck for his celebrated "Zoologie Philosophique." Not alone has this proceeded from the religious world—from whom abuse is natural of anything and everything extraordinary, and which does not harmonise with their creeds and dogmas—but even from men entitled, in other respects, to the name of philosophers. So general is this feeling of contempt for the French philosopher, that even the gentle and graceful author of the "Vestiges of the Natural History of Creation" mentions him rather slightingly. "Early in this century (1800), M. Lamarck, a naturalist *of the highest character*, suggested an hypothesis of organic progress which deservedly incurred much ridicule, *although it contained a glimmer of the truth*.....[Lamarck's] whole notion is obviously so inadequate to account for the rise of the organic kingdoms, *that we only can place it with pity among the follies of the wise.* Had the laws of organic development been known in his time, his theory might have been of a more imposing kind." And the talented and liberal reviewer of the "Vestiges," in the *Prospective Review*, speaks of the "wild and rather ridiculous speculations of the celebrated Lamarck." Professor Lyell devotes several chapters of his second volume to a refutation of Lamarck, which is of itself sufficient evidence that the Frenchman had good grounds for suspecting that a "transmutation of species" had and does take place, though not, perhaps, through the influence of such causes as he suggested. Professor Lyell gives some very cogent reasons why persons may be led to doubt the correctness of the hypothesis for "Specific Creations," or the "repeated interventions of a first cause," whenever new races of animals or plants made their appearance upon the earth. He says:

"The theory of the transmutation of species, has met with some degree of favour from many naturalists, from their desire to dispense, as far as possible, with the repeated intervention of a First Cause, as often as geological monuments attest the successive appearance of new races of animals and plants, and the extinction of those pre-existing. But, independently of a predisposition to account, if possible, for a series of changes in the organic world, by the regular action of secondary causes, we have seen that many perplexing difficulties present themselves to one who attempts to establish the nature and the reality of the specific character. And if once there appears ground of reasonable doubt, in regard to the constancy of species, the amount of transformation which they are capable of undergoing, may seem to resolve itself into a mere question of the quantity of time assigned to the past duration of animate existence.

"Before we enter upon our reasons for rejecting Lamarck's hypothesis, we shall recapitulate, in a few words, the phenomena, and the whole train of thought, by which we conceive it to have been suggested, and which have gained for this and analogous theories, both in ancient and modern times, a considerable number of votaries.

"In the first place, the various groups into which plants and animals may be thrown, seem almost invariably, to a beginner, to be so natural, that he is usually convinced at first, as was Linnæus to the last, 'that genera are as much founded in nature as the species which compose them.' When, by examining the numerous intermediate gradations, the student finds all lines of demarcation to be in most instances obliterated, even where they at first appeared most distinct, he grows more and more sceptical as to the real existence of genera, and finally regards them as mere arbitrary and artificial signs, invented like those which serve to distinguish the heavenly constellations for the convenience of classification, and having as little pretensions to reality.

"Doubts are then engendered in his mind as to whether species may not also be equally unreal. The student is probably first struck with the phenomenon, that some individuals are made to deviate widely from the ordinary type by the force of peculiar circumstances, and with the still more extraordinary fact, that the newly-acquired peculiarities are faithfully transmitted to the offspring. How far, he asks, may such variations extend in the course of indefinite periods of time, and during great vicissitudes in the physical condition of the globe? His growing incertitude is at first checked by the reflection, that nature has forbidden

the intermixture of the descendants of distinct original stocks, or has, at least, entailed sterility on their offspring, thereby preventing their being confounded together, and pointing out that a multitude of distinct types must have been created in the beginning and must have remained pure and uncorrupted to this day.

"Relying on this general law, he endeavours to solve each difficult problem by direct experiment, until he is astounded by the phenomenon of a prolific hybrid, and still more by an example of a hybrid perpetuating itself throughout several generations in the vegetable world. He then feels himself reduced to the dilemma of choosing between two alternatives, either to reject the test, or to declare that the two species, from the union of which the fruitful progeny has sprung, were mere varieties. If he prefer the latter, he is compelled to question the reality of the distinctness of all other supposed species which differ no more than the parents of such prolific hybrids; for although he may not be enabled immediately to procure, in all such instances, a fruitful offspring, yet experiments show, that after repeated failures the union of two recognised species may at last, under very favourable circumstances, give birth to a fertile progeny. Such circumstances, therefore, the naturalist may conceive to have occurred again and again, in the course of a great lapse of ages.

"His first opinions are now fairly unsettled, and every stay at which he has caught has given way one after another; he is in danger of falling into any new and visionary doctrine which may be presented to him; for he now regards every part of the animate creation as void of stability, and in a state of continual flux. In this mood he encounters the Geologist, who relates to him how there have been endless vicissitudes in the shape and structure of organic beings in former ages—how the approach to the present system of things has been gradual—that there has been a progressive development of organisation subservient to the purposes of life, from the most simple to the most complex state—that the appearance of man is the last phenomenon in a long succession of events—and, finally, that a series of physical revolutions can be traced in the inorganic world, coeval and coextensive with those of organic nature.

"These views seem immediately to confirm all his preconceived doubts as to the stability of the specific character, and he thinks he can discern an inseparable connexion between a series of changes in the inanimate world, and the capability of species to be indefinitely modified by the influence of external circumstances. Henceforth his speculations know no definite bounds; he gives the rein to conjecture, and fancies that the outward form, internal structure, instinctive faculties, nay, that reason itself, may have been gradually developed from some of the simplest states of existence,—that all animals, that man himself, and the irrational beings, may have had one common origin; that all may be parts of one continuous and progressive scheme of development from the most imperfect to the more complex; in fine, he renounces his belief in the high genealogy of his species, and looks forward, as if in compensation, to the future perfectibility of man in his physical, intellectual, and moral attributes."

The error of Lamarck consisted in his advancing a theory to account for the facts which he observed, without sufficient information or authority to satisfy the demands of science and common sense. That the muscles of a man's arm might be developed and enlarged by use, does not appear improbable; we know, in fact, that they do become so enlarged. But that the giraffe, from possessing a neck no longer than a horse, should acquire one many feet in length, by simply attempting to reach herbage situated very high, does draw somewhat upon the credulity of the reader. Besides, the inference which flows from such an hypothesis is clear and unavoidable: that if this is the true explanation of the phenomenon of the giraffe's neck, the necks of horses, asses, and oxen would also be lengthened by stretching them out to reach the hay in their racks; and that if they were placed in circumstances by which they were compelled, for several generations to pursue this process, we might expect to find them with considerably elongated necks. That a *modification* might take place under such circumstances, I do not think improbable; but other and more powerful causes would, I imagine, be required to produce the very marked difference which we observe between them and the giraffe. Besides, by the hypothesis of Lamarck, the neck of the giraffe would only be limited by the height of the trees upon which it had to browse; and if its food were twice the height of itself originally, a series of attempts to reach it would ultimately suffice to enable him to attain it. There is also, as I conceive, another and a radical defect in this portion of Lamarck's theory, in the circumstance of the giraffe being able to bring his head to the ground with equal facility that he can raise it many feet in the air. Had the length of his neck resulted from a series of attempts to reach the young and tender branches of the trees which

were situated very high, the articulation of the bones from such a process would have prevented his bending it *downwards*, unless we imagine a series of evolutions both up and down to have taken place alternately.

On the other hand, when we find that "the giraffe has in its tall neck the *same number of bones* with the pig, which scarcely appears to have a neck at all," we are led to conclude with the author of the "Vestiges," that "The whole train of animated beings, from the simplest and oldest up to the highest and most recent, are to be regarded as *a series of advances of the principle of development*, which have depended upon external physical circumstances, to which the resulting animals are appropriate." And that "the first step was an advance under favour of peculiar conditions, from the simplest forms of being to the next more complicated, and this through the ordinary process of generations." Lamarck's theory was not exclusively confined to external circumstances or efforts of the animal *after* birth; but also included changes in the womb, and during the process of generation.

Whilst the present generation cannot fail to be gratified with the position which they occupy in reference to the errors of their predecessors, they should not forget that they are indebted in no trifling degree to the abortive attempts of the wise men of by-gone days to account for the physical difficulties which beset their path at every step, for the present advanced state of science. They often saw clearly enough that certain facts, at first sight apparently very dissimilar, were capable of a common explanation; but instead of diligently endeavouring to solve the difficulty by the process of inductive reasoning—the only process *now* considered legitimate—they jumped to conclusions, thus saving themselves much trouble, but not greatly benefitting mankind or science. These very errors, however, in after ages, compelled an examination of the *facts* upon which they were based, and truth has frequently been evolved from the process.

For countless generations men never thought of disputing the truth of the assertion in the Jewish records of a specific and *only* creation of all animals and plants some five or six thousand years ago. When geology had arrived at the dignity of a science, it was found that the hypothesis of *one creation only* would not explain the phenomena which a careful examination of the crust of the earth disclosed, and after a time, and with much reluctance on the part of scientific professors, and of course much indignation on the part of theologians, *a series of creations* was put forward as an explanation. We are now, again entering upon a new era as respects creations, in which the idea *bids fair to be entirely set aside*, in favour of hypotheses more in harmony with the accumulating facts of science. —Ed. of the *L. of R.*]

DIGEST OF LAMARCK'S THEORY BY PROFESSOR LYELL.

In our first volume we treated of the changes which have taken place in the inorganic world within the historical era, and we must next turn our attention to those now in progress in the animated creation. In examining this class of phenomena, we shall treat first of the vicissitudes to which *species* are subject, and afterwards consider the influence of the powers of vitality in modifying the surface of the earth and the material constituents of its crust.

The first of these divisions will lead us among other topics, to inquire, first, whether species have a real and permanent existence in nature; or whether they are capable, as some naturalists pretend, of being indefinitely modified in the course of a long series of generations? Secondly, whether, if species have a real existence, the individuals composing them have been derived originally from many similar stocks, or each from one only, the descendants of which have spread themselves gradually from a particular point over the habitable lands and waters? Thirdly, how far the duration of each species of animal and plant is limited by its dependence on certain fluctuating and temporary conditions in the state of the animate and inanimate world? Fourthly, whether there be proofs of the successive extermination of species in the ordinary course of nature, and whether there be any reason for conjecturing that new animals and plants are created from time to time, to supply their place?

Before we can advance a step in our proposed inquiry, we must be able to define precisely the meaning which we attach to the term species. This is even more necessary in geology than in the ordinary studies of the naturalist; for they who deny that such a thing as a species exists, concede nevertheless that a botanist or zoologist may reason as if the specific character were constant, because they confine their observations to a brief period of time. Just as the geographer, in constructing his maps from century to century, may proceed as if the apparent places of the fixed stars remained absolutely the same, and as if no alteration was brought about by the precession of the equinoxes, so it is said in the organic world, the stability of a species may be taken as absolute, if we do not ex-

tend our views beyond the narrow period of human history; but let a sufficient number of centuries elapse, to allow of important revolutions in climate, physical geography, and other circumstances, and the characters, say they, of the descendants of common parents may deviate indefinitely from their original type.

Now, if these doctrines be tenable, we are at once presented with a principle of incessant change in the organic world, and no degree of dissimilarity in the plants and animals which may formerly have existed, and are found fossil, would entitle us to conclude that they may not have been the prototypes and progenitors of the species now living. Accordingly, M. Geoffroy St. Hilaire has declared his opinion, that there has been an uninterrupted succession in the animal kingdom effected by means of generation, from the earliest ages of the world up to the present day; and that the ancient animals whose remains have been preserved in the strata, however different, may nevertheless have been the ancestors of those now in being. Although this notion is not generally received, we feel that we are not warranted in assuming the contrary, without fully explaining the data and reasoning by which we conceive it may be refuted.

We shall begin by stating as concisely as possible all the facts and ingenious arguments by which the theory has been supported, and for this purpose we cannot do better than offer the reader a rapid sketch of Lamarck's statement of the proofs which he regards as confirmatory of the doctrine, and which he has derived partly from the works of his predecessors, and in part from original investigations.

We shall consider his proofs and inferences in the order in which they appear to have influenced his mind, and point out some of the results to which he was led while boldly following out his principles to their legitimate consequences.

The name of species, observes Lamarck, has been usually applied to "every collection of similar individuals, produced by other individuals like themselves." This definition, he admits, is correct, because every living individual bears a very close resemblance to those from which it springs. But this is not all which is usually implied by the term species, for the majority of naturalists agree with Linnæus in supposing that all the individuals propagated from one stock have certain distinguishing characters in common which will never vary, and which have remained the same since the creation of each species.

In order to shake this opinion, Lamarck enters upon the following line of argument. The more we advance in the knowledge of the different organised bodies which cove the surface of the globe, the more our embarrassment increases, to determine what ought to be regarded as a species, and still more how to limit and distinguish genera. In proportion as our collections are enriched, we see almost every void filled up, and all our lines of separation effaced; we are reduced to arbitrary determinations, and are sometimes fain to seize upon the slight differences of mere varieties, in order to form characters for what we choose to call a species, and sometimes we are induced to pronounce individuals but slightly differing, and which others regard as true species, to be varieties.

The greater the abundance of natural objects assembled together, the more do we discover proofs that everything passes by insensible shades into something else; that even the more remarkable differences are evanescent, and that nature has, for the most part, left us nothing at our disposal for establishing distinctions, save trifling and, in some respects, puerile particularities.

We find that many genera amongst animals and plants are of such an extent, in consequence of the number of species referred to them, that the study and determination of these last has become almost impracticable. When the species are arranged in a series, and placed near to each other, with due regard to their natural affinities, they each differ in so minute a degree from those next adjoining, that they almost melt into each other, and are in a manner confounded together. If we see isolated species, we may presume the absence of some more closely connected, and which have not yet been discovered. Already are there genera, and even entire orders—nay, whole classes, which present an approximation to the state of things here indicated.

If, when species have been thus placed in a regular series, we select one, and then, making a leap over several intermediate ones, we take a second, at some distance from the first, these two will, on comparison, be seen to be very dissimilar; and it is in this manner that every naturalist begins to study the objects which are at is own door. He then finds it an easy task to establish generic and specific distinctions; and it is only when his experience is enlarged, and when he has made himself master of the intermediate links, that his difficulties and ambiguities begin. But while we are thus compelled to resort to trifling and minute characters in our attempt to separate species, we find a striking disparity between individuals which we know to have descended from a common stock, and these newly-acquired peculiarites are regularly trans-

mitted from one generation to another, constituting what are called *races*.

From a great number of facts, continues the author, we learn that, in proportion as the individuals of one of our species change their situation, climate, and manner of living, they change also, by little and little, the consistence and proportions of their parts, their form, their faculties, and even their organisation, in such a manner, that everything in them comes at last to participate in the mutations to which they have been exposed. Even in the same climate a great difference of situation and exposure causes individuals to vary; but if these individuals continue to live and to be reproduced under the same difference of circumstances, distinctions are brought about in them which become in some degree essential to their existence. In a word, at the end of many successive generations, these individuals, which originally belonged to another species, are transformed into a new and distinct species.

Thus, for example, if the seeds of a grass, or any other plant which grows naturally in a moist meadow, be accidentally transported first to the slope of some neighbouring hill, where the soil, although at a greater elevation, is damp enough to allow the plant to live; and if, after having lived there, and having been several times regenerated, it reaches by degrees the drier and almost arid soil of a mountain declivity, it will then, if it succeeds in growing and perpetuates itself for a series of generations, be so changed that botanists who meet with it will regard it as a particular species. The unfavourable climate in this case, deficiency of nourishment, exposure to the winds, and other causes, give rise to a stunted and dwarfish race, with some organs more developed than others, and having proportions often quite peculiar.

What nature brings about in a great lapse of time we occasion suddenly by changing the circumstances in which a species has been accustomed to live. All are aware that vegetables taken from their birth-place and cultivated in gardens, undergo changes which render them no longer recognisable as the same plants. Many which were naturally hairy become smooth or nearly so; a great number of such as were creepers and trailed along the ground, rear their stalks and grow erect. Others lose their thorns or asperities; others again from the ligneous state which their stem possessed in hot climates, where they were indigenous, pass to the herbaceous, and, among them, some which were perennials become mere annuals. So well do botanists know the effects of such changes of circumstances that they are averse to describe species from garden specimens, unless they are sure that they have been cultivated for a very short period.

"Is not the cultivated wheat" (*Triticum sativum*), asks Lamarck, "a vegetable brought by man into the state in which we now see it? Let any one tell me in what country a similar plant grows wild, unless where it has escaped from cultivated fields? Where do we find in nature our cabbages, lettuces, and other culinary vegetables, in the state in which they appear in our gardens? Is it not the same in regard to a great quantity of animals which domesticity has changed or considerably modified?" Our domestic fowls and pigeons are unlike any wild birds. Our domestic ducks and geese have lost the faculty of raising themselves into the higher regions of the air, and crossing extensive countries in their flight, like the wild ducks and wild geese from which they were originally derived. A bird which we breed in a cage cannot, when restored to liberty, fly like others of the same species which have been always free. This small alteration of circumstances, however, has only diminished the power of flight, without modifying the form of any part of the wings. But when individuals of the same race are retained in captivity during a considerable length of time, the form even of their parts is gradually made to differ, especially if climate, nourishment, and other circumstances, be also altered.*

The numerous races of dogs which we have produced by domesticity are nowhere to be found in a wild state. In nature we should seek in vain for mastiffs, harriers, spaniels, greyhounds, and other races, between which the differences are sometimes so great, that they would be readily admitted as specific between wild animals; "yet all these have sprung originally from a single race, at first approaching very near to a wolf, if, indeed, the wolf be not the true type which at some period or other was domesticated by man."

* In reference to this it may be observed, that the gizzards of birds are subservient in a remarkable manner to a known law, to which the whole muscular system yields, that of increasing its growth in proportion to the functions imposed upon it; this was strikingly illustrated by Mr. Hunter, in the case of a sea-gull, which he kept for a year living, *contrary to its nature* [and therefore in opposition to god's intention], upon grain. At the end of that period he contrasted its gizzard with that of another sea-gull, which had been living on fish, and found that the digastric muscles of the former had acquired nearly three times the development of the latter. He accomplished similar phenomena by changing the food of an eagle and of a tame kite; the former throve very well on bread, but that it was dissatisfied with its fare is to be inferred from its seizing the earliest opportunity of breaking its chain and effecting its escape.—*Evers' Comparative Anatomy.*

Although important changes in the nature of the places which they inhabit modify the organisation of animals as well as vegetables, yet the former, says Lamarck, require more time to complete a considerable degree of transmutation, and, consequently, we are less sensible of such occurrences. Next to a diversity of the medium in which animals or plants may live, the circumstances which have most influence in modifying their organs are differences in exposure, climate, the nature of the soil, and other local particulars. These *circumstances* are as varied as are the characters of species, and, like them, pass by insensible shades into each other, there being every intermediate gradation between the opposite extremes. But each locality remains for a very long time the same, and is altered so slowly that we can only become conscious of the reality of the change, by consulting geological monuments, by which we learn that the order of things which now reigns in each place has not always prevailed, and by inference anticipate that it will not always continue the same.

Every considerable alteration in the local circumstances in which each race of animals exists, causes a change in their wants, and these new wants excite them to new actions and habits. These actions require the more frequent employment of some parts before but slightly exercised, and then greater development follows as a consequence of their more frequent use. Other organs no longer in use are impoverished and diminished in size, nay, are sometimes entirely annihilated, while in their place new parts are insensibly produced for the discharge of new functions.

We must here interrupt the author's argument, by observing that no positive fact is cited to exemplify the substitution of some *entirely new* sense, faculty, or organ, in the room of some other suppressed as useless.* All the instances adduced go only to prove that the dimensions and strength of members and the perfection of certain attributes may, in a long succession of generations, be lessened and enfeebled by disuse; or, on the contrary be matured and augmented by active exertion, just as we know that the power of scent is feeble in the greyhound, while its swiftness of pace and its acuteness of sight are remarkable—that the harrier and stag-hound, on the contrary, are comparatively slow in their movements, but excel in the sense of smelling.

We point out to the reader this important chasm in the chain of the evidence, because he might otherwise imagine that we had merely omitted the illustrations for the sake of brevity, but the plain truth is, that there were no examples to be found; and when Lamarck talks "of the efforts of internal sentiment," "the influence of subtle fluids," and the "acts of organisation," as causes whereby animals and plants may acquire *new organs*, he gives us names for things, and with a disregard to the strict rules of induction, resorts to fictions, as ideal as the "plastic virtue," and other phantoms of the middle ages.

It is evident, that if some well authenticated facts could have been adduced to establish one complete step in the process of transformation, such as the appearance, in individuals descending from a common stock, of a sense or organ entirely new, and a complete disappearance of some other enjoyed by their progenitors, that time alone might then be supposed sufficient to bring about any amount of metamorphosis. The gratuitous assumption, therefore, of a point so vital to the theory of transmutation, was unpardonable on the part of its advocate.

But to proceed with the system; it being assumed as an undoubted fact, that a change of external circumstances may cause one organ to become entirely obsolete, and a new one to be developed such as never before belonged to the species, the following proposition is announced, which, however staggering and absurd it may seem, is logically deduced from the assumed premises. "It is not the organs, or in other words, the nature and form of the parts of the body of an animal which have given rise to its habits, and its particular faculties, but on the contrary, its habits, its manner of living, and those of its progenitors have in the course of time determined the form of its body, the number and condition of its organs, in short, the faculties which it enjoys. Thus otters, beavers, water-fowl, turtles, and frogs, were not made web-footed in order that they might swim; but their wants having attracted them to the water in search of prey, they stretched out the toes of their feet to strike the water and move rapidly along its surface. By the repeated stretching of their toes, the skin which united them at the base acquired a habit of extension, until in the course of time the broad membranes which now connect their extremeties were formed.

"In like manner the antelope and the gazelle were not endowed with light agile forms, in order that they might escape by flight from carnivorous animals; but having been exposed to the danger of being devoured by lions, tigers, and other beasts of prey, they were compelled to exert them-

* Neither can the advocate of *specific creations* show in any animal an *entirely new* sense, faculty, or organ not possessed by any other animal in any other form.—ED. *L. R.*

selves in running with great celerity, a habit which, in the course of many generations, gave rise to the peculiar slenderness of their legs, and the agility and elegance of their forms.*

"The cameleopard was not gifted with a long flexible neck because it was destined to live in the interior of Africa, where the soil was arid and devoid of herbage, but being reduced by the nature of that country to support itself on the foliage of lofty trees, it contracted a habit of stretching itself up to reach the high boughs, until its fore-legs became longer than the hinder, and its neck so elongated, that it could raise its head to the height of twenty feet above the ground."

Another line of argument is then entered upon, in farther corroboration of the instability of species. In order it is said that individuals should perpetuate themselves unaltered by generation, those belonging to one species ought never to ally themselves to those of another: but such sexual unions do take place, both among plants and animals; and although the offspring of such irregular connexions are usually sterile, yet such is not always the case. Hybrids have sometimes proved prolific where the disparity between the species was not too great; and by this means alone, says Lamarck, varieties may gradually be created by near alliances, which would become races, and in the course of time would constitute what we term species.

But if the soundness of all these arguments and inferences be admitted, we are next to inquire, what were the original types of form, organization, and instinct, from which the diversities of character, as now exhibited by animals and plants have been derived? We know that individuals which are mere varietes of the same species, would, if their pedigree could be traced back far enough, terminate in a single stock; so according to the train of reasoning before described, the species of a genus, and even the general of a great family, must have had a common point of departure. What then was the single stem from which so many varieties of form have ramified? Were there many of these, or are we to refer the origin of the whole animate creation, as the Egyptian priests did that of the universe, to a single egg?

In the absence of any positive data for framing a theory on so obscure a subject, the following considerations were deemed of importance to guide conjecture.

In the first place, if we examine the whole series of known animals, from one extremity to the other, when they are arranged in the order of their natural relations, we find that we may pass progressively, or at least with very few interruptions, from beings of more simple to those of a more compound structure; and in proportion as the complexity of their organisation increases, the number and dignity of their faculties increase also. Among plants a similar approximation to a graduated scale of being is apparent. Secondly, it appears from geological observations, that plants and animals of more simple organisation existed on the globe before the appearance of those of more compound structure, and the latter were successively formed at later periods: each new race being more fully developed than the most perfect of the preceding era.

Of the truth of the last-mentioned geological theory, Lamarck seems to have been fully persuaded; and he also shews that he was deeply impressed with a belief prevalent amongst the older naturalists, that the primeval ocean invested the whole planet long after it became the habitation of living beings, and thus he was inclined to assert the priority of the types of marine animals to those of the terrestrial, and to fancy, for example, that the testacea of the ocean existed first, until some of them, by gradual evolution, were *improved* into those inhabiting the land.

These speculative views had already been, in a great degree, anticipated by Delamétherie in his Teliamed, and by several modern writers, so that the tables were completely turned on the philosophers of antiquity, with whom it was a received maxim, that created things were always most perfect when they came first from the hands of their Maker, and that there was a tendency to progressive deterioration in sublunary things when left to themselves—

——— omnia fatis
In pejus ruere, ac retrò sublapsa referri.

So deeply was the faith of the ancient schools of philosophy imbued with this doctrine, that to check this universal proneness to degeneracy, nothing less than the re-intervention of the Deity was thought adequate; and it was held, that thereby the order, excellence, and pristine energy of the moral and physical world had been repeatedly restored.

But when the possibility of the indefinite modification of individuals descending from common parents was once assumed, as also the geological generalization respecting the progressive developement of organic life, it was natural that the ancient dogma should be rejected, or rather reversed; and that the most simple and imperfect forms and faculties should be conceived to have been

* See "Natural Theology Exposed," p. 3, col. 2, *Library of Reason*, No. 5.

the originals whence all others were developed. Accordingly, in conformity to these views, inert matter was supposed to have been first endowed with life; until in the course of ages, sensation was superadded to mere vitality: sight, hearing, and the other senses, were afterwards acquired; and then instinct and the mental faculties; until, finally, by virtue of the tendency of things to *progressive improvement*, the irrational was developed into the rational.

The reader, however, will immediately perceive, that if all the higher orders of plants and animals were thus supposed to be comparatively modern, and to have been derived in a long series of generations from those of more simple conformation, some further hypothesis became indispensable, in order to explain why, after an indefinite lapse of ages, there were still so many beings of the simplest structure. Why have the majority of existing creatures remained stationary throughout this long succession of epochs, while others have made such prodigious advances? Why are there still such multitudes of infusoria and polypes, or of confervæ and other cryptogamic plants? Why, moreover, has the process of development acted with such unequal and irregular force on those classes of beings which have been greatly perfected, so that there are wide chasms in the series; gaps so enormous, that Lamarck fairly admits we can never expect to fill them up by future discoveries?

The following hypothesis was provided to meet these objections. Nature, we are told, is not an intelligence, nor the Deity, but a delegated power—a mere instrument —a piece of mechanism acting by necessity —an order of things constituted by the Supreme Being, and subject to laws which are the expressions of his will. This nature is *obliged* to proceed gradually in all her operations; she cannot produce animals and plants of all classes at once, but must always begin by the formation of the most simple kinds; and out of them elaborate the more compound, adding to them successively, different systems of organs, and multiplying more and more their number and energy.

This nature is daily engaged in the formation of the elementary rudiments of animal and vegetable existence, which correspond to what the ancients termed *spontaneous generations*. She is always beginning anew, day by day, the work of creation, by forming monads, or "rough draughts" (ébauches), which are the only living things she ever gives birth to *directly*.

There are distinct primary rudiments of plants and animals, and *probably* of each of the great divisions of the animal and vegetable kingdoms. These are gradually developed into the higher and more perfect classes by the slow, but unceasing agency of two influential principles: first, *the tendency to progressive advancement* in organisation, accompanied by greater dignity in instinct, intelligence, &c.; secondly, *the force of external circumstances*, or of variations in the physical condition of the earth, or the mutual relations of plants and animals. For as species spread themselves gradually over the globe, they are exposed from time to time to variations in climate, and to changes in the quantity and quality of their food; they meet with new plants and animals which assist or retard their development, by supplying them with nutriment, or destroying their foes. The nature also of each locality is in itself fluctuating, so that even if the relation of other animals and plants were invariable, the habits and organisation of species would be modified by the influence of local revolutions.

Now, if the first of these principles, *the tendency to progressive development*, were left to exert itself with perfect freedom, it would give rise, says Lamarck, in the course of ages, to a graduated scale of being, where the most insensible transition might be traced from the simplest to the most compound structure, from the humblest to the most exalted degree of intelligence. But in consequence of the perpetual interference of the *external causes* before mentioned, this regular order is greatly interfered with, and an approximation only to such a state of things as exhibited by the animate creation, the progress of some races being retarded by unfavourable, and that of others accelerated by favourable, combinations of circumstances. Hence, all kinds of anomalies interrupt the continuity of the plan, and chasms, into which whole genera or families might be inserted, are seen to separate the nearest existing portions of the series.

Such is the machinery of the Lamarckian system; but our readers will hardly, perhaps, be able to form a perfect conception of so complicated a piece of mechanism, unless we exhibit it in motion, and show in what manner it can work out, under the author's guidance, all the extraordinary effects which we behold in the present state of the animate creation. We have only space for exhibiting a small part of the entire process by which a complete metamorphosis is achieved, and shall, therefore, omit the mode whereby, after a countless succession of generations, a small gelatinous body is transformed into an oak or an ape. We pass on at once to the last grand step in the progressive scheme, whereby the

orang-outang, having been already evolved out of a monad, is made slowly to attain the attributes and dignity of man.

One of the races of quadrumanous animals which had reached the highest state of perfection, lost, by constraint of circumstances (concerning the exact nature of which tradition is unfortunately silent), the habit of climbing trees, and of hanging on by grasping the boughs with their feet as with hands. The individuals of this race being obliged for a long series of generations to use their feet exclusively for walking, and ceasing to employ their hands as feet, were transformed into bimanous animals, and what before were thumbs became mere toes, no separation being required when their feet were used solely for walking. Having acquired a habit of holding themselves upright, their legs and feet assumed insensibly a conformation fitted to support them in an erect attitude, till at last these animals could no longer go on all fours without much inconvenience.

The Angola orang *(Simia troglodytes)*, Linn., is the most perfect of animals, much more so than the Indian orang. *(Simia Satyrus)*, which has been called the orang-outang, although *both* are *very inferior* to man in corporeal powers and intelligence. These animals frequently hold themselves upright, but their organisation has *not yet* been sufficiently modified to sustain them habitually in this attitude, so that the standing posture is very uneasy to them. When the Indian orang is compelled to take flight from pressing danger, he immediately falls down upon all fours, showing clearly that this was the original position of the animal. Even in man, whose organisation, in the course of a long series of generations, has advanced so much farther, the upright posture is fatiguing and can only be supported for a limited time, and by aid of the contraction of many muscles. If the vertebral column formed the axis of the human body, and supported the head and all the other parts in equilibrium, then might the upright position be a state of repose; but as the human head does not articulate in the centre of gravity; as the chest, belly, and other parts, press almost entirely forward with their whole weight, and as the vertebral column reposes upon an oblique base, a watchful activity is required to prevent the body from falling. Children which have large heads and prominent bellies can hardly walk at the end even of two years, and their frequent tumbles indicate the natural tendency in man to resume the quadrupedal state.

Now, when so much progress had been made by the quadrumanous animals before mentioned, that they could hold themselves habitually in an erect attitude, and were accustomed to a wide range of vision, and ceased to use their jaws for fighting, and tearing, or for clipping herbs for food, their snout became gradually shorter, their incisor teeth became vertical, and the facial angle grew more open.

Among other ideas which the natural *tendency to perfection* engendered, the desire of ruling suggested itself, and this race succeeded at length in getting the better of the other animals, and made themselves masters of all those spots on the surface of the globe which best suited them. They drove out the animals which approached nearest to them in organisation and intelligence, and which were in a condition to dispute with them the good things of this world, forcing them to take refuge in deserts, woods, and wildernesses, where there multiplication was checked, and the progressive development of their faculties retarded, while in the mean time the dominant race spread itself in every direction, and lived in large companies where new wants were successively created, exciting them to industy, and gradually perfecting their means and faculties.

In the supremacy and increased intelligence acquired by the ruling race, we see an illustration of the naturnl tendency of the organic world to grow more perfect, and in their influence in repressing the advance of others, an example of one of those disturbing causes before enumerated, that *force of external circumstances*, which causes such wide chasms in the regular series of animated beings.

When the individuals of the dominant race became very numerous, their ideas greatly increased in number, and they felt the necessity of communicating them to each other, and of augmenting and varying the signs proper for the communication of ideas. Meanwhile the inferior quadrumanous animals, although most of them were gregarious, acquired no new ideas, being persecuted and restless in the deserts, and obliged to fly and conceal themselves, so that they conceived no new wants. Such ideas as they already had remained unaltered, and they could dispense with the communication of the greater part of these. To make themselves, therefore, understood by their fellows, required merely a few movements of the body or limbs—whistling, and the uttering of certain cries varied by the inflexions of the voice.

On the contrary, the individuals of the ascendant race, animated with a desire of interchanging their ideas, which became more and more numerous, were prompted to multiply the means of communication, and were no longer satisfied with mere pan-

tomimic signs, nor even with all the possible inflexions of the voice, but made continual efforts to acquire the power of uttering articulate sounds, employing a few at first, but afterwards varying and perfecting them according to the increase of their wants. The habitual exercise of their throat, tongue and lips, insensibly modified the conformation of these organs, until they became fitted for the faculty of speech.

In effecting this mighty change," the exigencies of the individuals were the sole agents, they gave rise to efforts, and the organs proper for articulating sounds were developed by their habitual employment." Hence, in this peculiar race, the origin of the admirable faculty of speech; hence also the diversity of languages, since the distance of places where the individuals composing the race established themselves soon favoured the corruption of conventional signs.—*Lyell's Geology*, Vol. ii.

REMONSTRANCE OF THE ROMAN CATHOLIC PRELATES

AGAINST THE PROPOSED LAY COLLEGES FOR IRELAND.

" *To his Excellency Lord Heytesbury, Lord-Lieutenant-General and Governor General of Ireland.—The Memorial of the Roman Catholic Archbishops and Bishops of Ireland.*

" Humbly showeth—That memorialists are disposed to co-operate on fair and reasonable terms with her Majesty's government and the legislature in establishing a system for the further extension of academical education in Ireland. That the circumstances of the present population of Ireland afford plain evidence that a large majority of the students belonging to the middle classes will be Roman Catholics; and memorialists as their spiritual pastors, consider it their indispensable duty to secure to the utmost of their power the most effectual means of protecting the faith and morals of the students in the new colleges, which are to be erected for their better education. That a *fair proportion* of the professors, and other office-bearers in the new colleges, should be members of the Roman Catholic church, whose moral conduct shall have been properly *certified by testimonials of character signed by their respective prelates.* And that all the office-bearers in those colleges should be appointed by a board of trustees, of which the Roman Catholic prelates of the province, in which these colleges shall be erected, shall be members. That the Roman Catholic pupils could not attend the lectures on HISTORY, LOGIC, METAPHYSICS, MORAL PHILOSOPHY, GEOLOGY, OR ANATOMY, *without exposing their faith or morals to imminent danger, unless a Roman Catholic professor will be appointed for each of those chairs.* That if any *president, vice-president, professor, or office-bearer* in any of the new colleges shall be convicted before the board of trustees, of *attempting to undermine the faith*, or injure the morals of any student in those institutions, he shall be *immediately removed from his office*, by the same board. That as it is not contemplated that the students shall be provided with lodging in the new colleges, there shall be a Roman Catholic chaplain to superintend the moral and religious instruction of the Roman Catholic students belonging to each of those colleges; that the appointment of each chaplain with a suitable salary shall be made on the recommendation of the Roman Catholic bishop of the diocess in which the college is situate, and that the same prelate shall have full power and authority to remove such Roman Catholic chaplain from his situation. Signed, on behalf of the meeting, ⋈ D. Murray, chairman.—Dublin, May 23rd, 1845."

The above demand of the Roman Catholic hierarchy of Ireland, cannot be too much dwelt upon, or too seriously considered. It contains an admission of a most important character, namely, that *science* inevitably tends to the destruction of religious creeds and dogmas. It must not be imagined that I was ignorant of this *fact* before; far from it, I am well aware that it has been declared and dwelt upon by a thousand declaimers previously; but it has never, at least in my time, been put forward in so positive and unmistakeable a form, by a *body of priests* of any denomination, as in the document at the head of this article. On this account it is valuable, far more valuable, than any *individual* opinion, however high the authority. Mr. G. H. Lewes, in his Introduction to "A Biographical History of Philosophy" (Knight's Weekly Volume, No. XLV.), has taken some pains to point out the distinction between *philosophy* and *science;* and I think by the sub-

stitution of the word *religion* for the word philosophy, and also by the substitution of the pretensions of religion for the pretensions of philosophy, we shall have a very correct description of the differences between religion and science. He says, "Philosophy (Metaphysical Philosophy, remember!) aspires to the knowledge of *essences* and *causes*. Positive science aspires only to the knowledge of *laws*. The one pretends to discover *what things are* in themselves, apart from their appearances to sense, and whence they came. The other (science) only wishes to discover the *modus operandi* (mode of operation); observing the constant *co-existence* and *successions* of phenomena amongst themselves, and generalising them into some one *law*. In other words, the one endeavours to compass the *impossible;* the other knows the limits of human faculties and contents itself with the *possible*." May it not truly be said of *religion* that it aspires to the knowledge of *God* and *final causes?* That it *pretends* to discover what *God* and *eternity*, and the *human soul* or mind, are in themselves, apart from their appearances to *sense* and *whence they came!* And is it not ever endeavouring to encompass the *impossible?* Religion, with glaring inconsistency, on the one hand declares that man's powers are finite, that he is but a poor miserable worm, too contemptible and insignificant to deserve a moment's thought from the infinite mind that governs the universe; and on the other hand pretends to a knowledge of the will and the wishes of that infinite mind, that this earth, our solar system, and the myriads of worlds beyond and around it were created for his service and admiration, and that those who please the creator in their perigrination through this life will, at its close, be admitted into his presence, to a more intimate knowledge of him, and pass an eternity of happiness in his society—whilst those unfortunates who displease him will be driven from his presence, and tortured throughout the same eternity. These are the fundamentals of the christian religion, at least, and as that is essentially the religion of this country, we need not trouble ourselves respecting the pretensions of other countries. Mr. Lewes further remarks, "How many ingenious efforts have been made to discover the *cause* of life!—how many theories respecting the vital principle! All such have been frivolous, because futile. The man of science knows that causes are not to be discovered—knows that life is a thing which escapes investigation, because it defies experiment." How many ingenious efforts have been made to discover *the cause of all things!* how many theories respecting the *amimus mundi*, the soul of the world, or God! All such have been frivolous, because futile. The man of science, or the reasoner from induction, knows that final causes are not to be discovered—knows that God escapes investigation, because it defies experiment. What folly for men to pretend to a knowledge of God, when their ignorance is so apparent.

Again, he says, "This then is the difference between the methods of philosophy and positive science: the one proceeds from *a priori* axioms—that is, from axioms *taken up without having undergone the laborious but indispensable process of previous verification;* the other proceeds from axioms which have been rigidly verified. *The one proceeds from an assumption*, the other from a fact." This is strikingly true of *religion:* its axioms have been taken up without having undergone the laborious—because, with it, impossible—process of previous verification; it has proceeded entirely upon assumption, *and is not a fact!*

It was only reasonable to expect, then, that the proposition for establishing colleges for the teaching of the *sciences alone*, would be met by the opposition of the priests. Not because they were Roman Catholics, for the same thing would have occurred had the proposition been for the establishment of a national system of education for Great Britain, without the *bible* for its foundation—*a sound religious education* being considered the first principle of all mental training.

The newspaper press very naturally took notice of the extraordinary document of the Irish prelates; and the *Spectator* remarking upon it, observes:—

"The measure for academical education continues to make a ferment in Ireland. The bishops have agreed to a memorial, not expressing any sweeping disapproval—in which respect they evidently lag behind Mr. O'Connell's wish—but claiming, withal, entire control over the pupils and over appointments of all professorships in which theology is implicated—including logic, geology, and *anatomy!* The Irish Catholic hierarchy are afraid lest the pupil, in tracing the course of the *par vagum*, should stumble upon some heretical ganglion, or should contract Cuvierian notions of the Preadamite epochs, before he is case-hardened by dogma against any purely logical inferences. Such is bigotry; which we in England can so plainly discern when it does not take a Protestant shape."

The *Examiner* has also some excellent comments:—

"The Catholic objections to the plan, and counter-pretensions, have not the violence and indecency, we must add, of some of the no-popery hostility, but nevertheless

they are not reasonable. How idle is the demand that the professors of logic, metaphysics, moral philosophy, geology, and anatomy shall be Catholics. If a Whatley were a candidate for the chair of logic, the Catholic bishops would put him aside as ineligible—eminent without rival as he is as a logician, and of a candour, simplicity, good faith, and liberality as matchless. An Arnold they would hold ineligible to the chair of history; a Buckland to that of geology. Yet eminence in science and bigotry in religion are almost incompatible. To name modern instances of the two is difficult. Geology and anatomy are, perhaps, the two studies the least tending to a sectarian or proselytising zeal, and they are amongst those from which it is proposed to exclude Protestant professors. There is but one safe and good rule, to choose the best qualified in the science required, and to leave the rest to the securities of the sense and conduct which may be presumed concomitant of high attainments. And is it for Catholics at this time of day to be proposing tests and exclusions? Is it for them to be taking up the miserable fetters which the improved genius of the age has been knocking away from themselves, and to impose them upon science and letters? Let us have no revival of disabilities, or, if it must be, let it be in any field but that of science and literature. Who inquires the creed of a lecturer, or the religion of the surgeon who can best perform a painful and dangerous operation? Take knowledge from its best source, wherever it can be had. Don't refuse the light because it is not that of your own church tapers. Shame your no-popery enemies by a truly Catholic acceptance of knowledge, without any distinction but that in favour of the best."

Altogether independent of the foregoing considerations, the assertion of the Irish priests, that the *faith* and *morals* of the students would be exposed to "imminent danger, unless a *Roman Catholic* professor will be appointed" for each of the chairs named, is curious, as showing *the sort* of science likely to be taught by religious professors. For the chair of *logic* I should recommend a professor of the Saint Athanasian school: one who could *prove* that one was three, and three one; and yet not one but three, and not three but one. For anatomy, one who would insist that the seat of reason and feeling was the heart, as stated in the bible, and not the brain, as affirmed by modern science; who could see in club feet, in the deaf and dumb, blind, and insane, beautiful and striking evidences of design and of god's goodness to all his creatures. For history, one should be procured (and they are plenty), who could see in the misery, war, and bloodshed which have accompanied christianity from its first promulgation, the fulfilment of Christ's mission; and trace to the Reformation and the march of science and *railroads*, all the social and political evils which Europe has suffered since the days of Luther. Metaphysics and moral philosophy would be best taught by a Jesuit. And for geology—if he could only be persuaded to join the Roman Catholic church—no one is so well fitted as the present Dean of York, who, at a late meeting of the British Association (1844), explained to his own satisfaction—if not to the satisfaction of his hearers—that all the changes and phenomena of the earth's crust *might* have taken place in a few days: scientific geologists (not religious ones) erroneously imagining that some hundreds, thousands, or even millions of *years* must have been occupied in their production.

The Roman Catholics, as I have before intimated, are not the only religious body who apprehend danger to the *faith* and *morals* of their devotees from a right teaching of science. *All* religious sects, with the single exception, I believe of the Unitarian, doggedly set themselves against it, and endeavour to preach it and write it down. They know it has a tendency to destroy all sects, to amalgamate all parties—and difference of opinion and animosities of parties, is the food upon which they live, and the state of things upon which they thrive. The priests have a *book* by which they test all human knowledge; and whenever they differ, science is rejected as pernicious, and declaimed against as immoral. "Now there is *one volume* (says the *Church of England Quarterly Review*, for Sept. 1842) *which we rank higher than the book of nature* or the volumes of science, *and to the standard of which we would bring the book of nature*, assured that where they differ we have not read the book of nature aright." It would puzzle the Catholics or any other religious sect, to go beyond this.

THE EDITOR.

THEOLOGICAL VARIETIES, &c.

RELIGION AND PUBLIC MEN.—Voltaire, as is well known, was the great assailent of christianity during the whole of his long life; and as such has ever been an object of intense dislike and terror to the great part of the English people, who have long been distinguished for the strength of their religious opinions. *This has compelled all public men* (especially of late years) *to appear religious also, whatever might be their real opinions.* In a popular government this was certain to occur; so that, in fact, *the more any man might doubt on the subject of popular belief,* and thus be himself open to imputation, the more violent usually would be his declarations against irreligion in others; and the more prone would he be to side with any injustice by the general opinion to those who opposed the popular belief. To set the public right—to describe what justice and a real love of truth required, *was* and *is* a dangerous task; and one not likely to be hazarded except by him whose love of justice conquered the fear of evil to himself, or who felt himself so firm in his own orthodoxy, as well as in the popular estimation of his religious belief, that he could safely affront the chance of evil imputations, to which his truth and honesty might lead him.—*Westminster Review*, June, 1845. Life of Voltaire by Lord Brougham.

OPINION.—No man is accountable for the opinion he may form, the conclusion at which he may arrive, provided that he has taken due pains to inform his mind and fix his judgment. But for the conduct of his understanding he certainly is responsible. He does more than err if he negligently proceeds in the inquiry; he does more than err if he allows any motive to sway his mind save the constant and single desire of finding the truth; he does more than err if he suffers the least influence of temper or of weak feeling to warp his judgment; he does more than err if he listen rather to ridicule than to reason, unless it be that ridicule which springs from the contemplation of gross and manifest absurdity, and which is in truth argument and not absurdity.—*Lord Brougham.* Life of Voltaire.—["Voltaire," says the *Westminster Review*, "having honestly inquired, and having formed a strong opinion adverse to christianity," the expression of such an opinion could not, says Lord Brougham, be blasphemy on his part.]

VOLTAIRE was born at Chatenay on the 29th of February, 1694, and was baptised at Paris in the church of St. André-des-Arcs, the 22nd of November in the same year. This delay was caused by the extreme weakness of the child, and it is remarked that both he and Fontenelle, the two most celebrated men of their time, both lived to an extraordinary old age, although neither was expected to survive his birth above a few hours. Voltaire died in his eighty-fifth years, and Fontenelle lived to be within a few weeks of a hundred.—*Westminster Review.*

Our notions in England as to what is virtue, have been utterly confounded by the oevrwhelming importance we attach to a particular religious belief. Justice, generosity, kindliness of disposition, a stedfast adherence to moral precepts, an active labouring for the happiness of our fellows—all, all is forgotten, misinterpetered, or denied, if the person of whom we are judging believe not as we do. This one misfortune, for it is no crime, obliterates from our minds every sentiment of tolerance; injustice to an unbeliever is no longer injustice; all the kind precepts of the religion to which we attach so much importance are either perverted, or wholly passed by; fierce intolerance reigns triumphant; cruelty and bigotry take possession of our souls; we assume infallibility, and with pious complacency perpetrate every possible injustice. We would fain hope that a better time is approaching; and we cannot but hail as a symptom of this happier era the candid appreciation of the merits of Voltaire by one who, like Lord Brougham, has had his power and influence long dependant upon the popular opinion of his countrymen.—*Ibid.*

SHORT WAY WITH INFIDELS.—Tell them that if there is anything good, and pure, and holy, and heavenly in the world, the bible exhorts us to practice it; and if

there be anything that is evil, and base, and vile in the world, the bible commands us to avoid it. [And what if the infidel asked for proof? Would it be forthcoming? If so, how comes it that it has never yet been produced?] Depend upon it, this course will be better than wrangling and jangling about sticks and straws, losing your temper, and feeling yourself outwitted into the bargain, by the borrowed conceits of silly coxcombs, whose hearts and whose heads are equally empty; and whose silly prattle to overturn the truth of scripture is like the efforts of a poor blind mole to tear up from the ground an oak of 100 years' growth, by burrowing under one of the least of its roots. [The conceit of the writer of this paragraph must have been a fair match for the "silly coxcombs whose hearts and whose heads are equally empty."]

PERSECUTION OF ROMAN CATHOLICS BY THE CHURCH OF ENGLAND (5 Caroli, 1629).—On the 24th of March, 1628-9, a second proclamation was issued out for the apprehension of Richard Smith, a Popish priest, styled and calling himself the Bishop of Calcedon, to this effect:—"That his majesty by his proclamation, bearing date the 11th day of Dec. last past (for the reasons therein expressed) did straitly command, that none of his subjects should *harbour or conceal* the said Smith, but that forthwith they should arrest and apprehend his body, and bring him before the next justice of the peace to the place where he should be apprehended; whom his majesty thereby commands to be committed to prison without bail or main prize; and presently to inform his majesty, or his privy council of his apprehension. And the king did thereby declare, that if any person should then after, directly or indirectly, harbour or conceal the said Smith, or use or connive at any means whereby the said Smith might escape from being apprehended or arrested, that his majesty extend *the utmost severity* of his laws against every such offender, as by his proclamation more at large appears. Which proclamation *hath not yet brought that good effect which his majesty expected;* the said Smith being still hidden and harboured by those, who being *infected and blinded with popish superstition*, prefer their respects to him, before their duty to their king, and the fear of his high displeasure, and the consequence thereof. His majesty therefore, by the advice of his privy council, hath thought fit by this his second proclamation, to renew his former commands in that behalf. And to the end that none of his subjects may hereafter excuse themselves, by a pretended ignorance of the danger they shall fall into, if they shall harbour or conceal him, his majesty doth hereby publish and declare, that the said Smith is not only a popish priest, *and with high presumption* taketh upon him to exercise ecclesiastical jurisdiction, pretended to be derived from the see of Rome, within this realm, and endeavour to seduce the king's subjects from the *true religion* established in the *Church of England*, (which, *by God's assistance*, his majesty shall ever constantly maintain) but doth also seditiously traitorously hold correspondence with the king's enemies, tending to the disturbance of the state. And therefore his majesty doth now again renew his former command for the apprehension of the said Smith; and doth hereby farther signify, that whosoever shall lodge, harbour, or relieve the said Smith, or any other priest, jesuit, or other having taken orders by authority pretended to be derived from the see of Rome, shall incur the danger of the king's laws made against the harbourers, lodgers, and relievers of priests, to the full extent thereof, *which by the statutes of this realm is felony.* And the king doth further hereby declare, that whosoever shall discover the said Smith, and cause him to be apprehended, as aforesaid, shall have *a reward of one hundred pounds* in money, to be presently paid unto him by the king; and shall also have the benefit of such penalties and forfeitures which shall or may accrue unto his majesty, and be forfeited by that person in whose house the said Smith shall have been found to have been harboured or concealed," &c. This bishop, as is hereafter mentioned, had been, since the last year of king James, *severely persecuted by the regular priests* in England, who at last overpowered the bishop's faction here, and forced him to fly for succour into France, where he was received by Cardinal Richelieu.—*Historical Collections.* By John Rushworth, Esq., 1680.

GOD.—Movement is the law of the human mind; the definite is the dream of his pride and his ignorance. *God is a limit which appears ever to recede as humanity approaches him: we are ever advancing and never arrive.* This great Divine Figure, which man from his infancy is ever striving to reach, and to imprison in his structures raised by hands, for ever enlarges and expands; it outstrips the narrow limits of temples, and leave the altars to crumble into dust; and calls man to seek for it where it resides—in thought, in intelligence, in virtue, in nature, in infinity.—*Lamartine.*

[Does not this entirely destroy the fundamental doctrine of revelation, namely that God *did* reveal himself to man in all *truth* and holiness, just as he really *was* and *is*, and *ever will be?* The idea of Lamartine is

very philosophical but not very religious—that men really have formed themselves gods at one time, which some time subsequent would not bear the test of examination, in consequence of the more advanced and improved ideas of men, is both reasonable to imagine and correct in fact—but this only proves what has been oft-times urged that *gods are formed by men*, and that they only exist in the minds of their admirers and worshippers. If this be not so, how comes it that the ideas of god are always in agreement and harmony with the state of intellect of the people holding such ideas; and that as they gather more extended ideas of nature and its operations, and as their minds become exalted and expanded by reflection and experience, so do they seek to refine and exalt the divinity which they imagine governs the universe. This *fact* once clearly seen *ought to lead inevitably to atheism*—for the god who is always changing his forms and attributes, and whose existence is entirely dependent upon the intelligence of man (for some men, even in the present day, and in our own country have no idea of a god), is in reality *no god at all*, a mere fiction of the brain, as unsubstantial as a ghost, a witch, a cherubim, or one of those little nodies, "with neither nether sides nor bodies," whom we see carved on tombstones.—*Ed. of L. R.*]

PROTESTATION OF THE BISHOPS IN IRELAND AGAINST POPERY (1629.)—"The religion of Popists is *superstitious and idolatrous*, their faith and doctrine *erroneous* and *heretical*, their church (in respect of both) *apostatical*; to give them therefore a *toleration of religion*, or to consent that they may freely exercise their religion, and profess their faith and doctrine, *is a grievous sin*, and that in two respects: First, it is to make ourselves accessary, not only to their *superstitious idolatries*, *heresies*, and in a word to all the *abominations of popery*, but also (which is a consequent of the former) *to the perdition of the seduced people which perish in the deluge of the Catholic apostacy*. Secondly, to grant them a toleration in respect of any money to be given, or contribution to be made by them, is to set religion to sale, and with it the souls of the people, whom Christ our Saviour hath redeemed with his blood; and as it is a matter of most dangerous consequence: the consideration where of we leave to the wise and judicious, beseeching the zealous God of Truth, to make those who care in authority zealous of God's glory, and the advancement of true religion, ZEALOUS, RESOLUTE, and COURAGEOUS against all popery, superstition, and idolatry."—Historical Collections from 1628 to 1640. By John Rushworth, Esq., of Lincoln's Inn.

ILLUSTRATION OF DESIGN.—"Are not two sparrows sold for a farthing? and one of them shall not fall on the ground without your father."—*Mat.* x. 29.—*Singular Accident to a Baptist Minister.*—We are sorry to have to state that the Rev. T. Ford, minister of the Portland (Baptist) chapel, met with an accident, whilst in the pulpit on Sunday morning last, the effects of which, it is feared, will disable him for some weeks from conducting religious service. The rev. gentleman was sitting in the pulpit, in the act of looking out the text for his intended sermon, when a portion of the cornice, having been loosened by damp, fell from the ceiling over the pulpit, and a considerable quantity of the material struck Mr. Ford on the head. Two or three severe cuts were inflicted, and the rev. gent. had to be assisted down from the pulpit.—*Hampshire Independent.*

THE GREAT FACT.—I will frankly own to you, I never had much faith in any of these proposals or proposers; but they were a change, and that is something. But I have been persuaded of late that there is something going on in this country of more efficacy; a remedial power, as I believe and irresistable; but whether remedial or not, at any rate a power that will mar all or cure all. You apprehend me? I speak of the arrival of more than 300,000 strangers in this island. How will you feed them? How will you clothe them? How will you house them? They have given up butchers' meat; must they give up bread? And as for raiment and shelter, the rags of the kingdom are exhausted, and your sinks and cellars already swarm like rabbit-warrens. "'Tis an awful consideration," said Egremont, musing. "Awful," said Gerard; "'tis the most solemn thing since the deluge. What kingdom can stand against it? Why go to your history—you're a scholar—and see the fall of the great Roman empire—what was that? Every now and then there came two or three hundred thousand strangers out of the forests, and crossed the mountains and rivers. They come to us every year, and in greater numbers. What are your invasions of the barbarous nations, your Goths and Visigoths, your Lombards and Huns, to our population returns?"—*Sibil.*

LETTER OF MARY QUEEN OF SCOTS ON BEING REFUSED THE SERVICES OF A CONFESSOR BEFORE HER EXECUTION.—"I have been hard pressed to-day for my religion, and to receive the consolation of the heretics. You will learn from Bourgoin (her physician) that I have at least

made a faithful profession of the faith in which I wish to die. I asked for you to receive my confession and to give me the eucharist, which has been cruelly refused me, as well as the choice of my place of burial and the power of making my will freely, or of writing anything, except by their hands and under the good pleasure of their mistress. Under these difficulties, I confess the grievance of my sins generally, as I intended to do to you in particular, entreating you in the name of God, to pray and watch this night with me for the satisfaction of my sins, and to send me your absolution and pardon for all the offences I have committed towards you. I will endeavour to see you in their presence, as they have been granted this permission to the master of my household (Melvil); and if I am allowed, I will ask your blessings on my knees. Advise me of the prayers most suitable to this night and to-morrow, for the time is short, and I have not leisure to write. But I will recommend you like the rest (to the king of France), and especially your beneficers will be assured to you, and I will recommend you to the king. Advise me by writing of anything that you deem conducive to salvation. I will send you a last little token."

"Great *effects* from little *causes* spring."

ENGLAND'S GREATNESS AND EXISTENCE TRACED TO THE BAD MEMORY OF A SQUIRREL.—The following newspaper paragraph contains one of those simple, beautiful, and convincing evidences of the profound wisdom of the Creator, which naturalists and newspaper editors have such a faculty for finding out:—"*The general truth that nothing is created without some wise purpose is beautifully illustrated in the squirrel.* It is a singular but well-authenticated circumstance that most of those oaks which are called spontaneous are planted by this animal, in which way he has performed the most essential service to mankind and particularly to the inhabitants of England. It is related in some English work that a gentleman walking one day in the woods belonging to the Duke of Beaufort, near Troy-house, in the county of Monmouth, his attention was diverted by a squirrel which sat very composedly on the ground. He stopped to observe his motions; in a few moments the squirrel darted to the top of the tree beneath which he had been sitting. In an instant he was down with an acorn in his mouth, and after digging a small hole he stooped down and deposited the acorn; then covering it he darted up the tree again. In a moment he was down again with another, which he buried in the same manner. This he continued to do as long as the observer thought proper to watch him. This industry of the little animal is directed to the purpose of securing him against want in the winter, and it is probable that his memory is not sufficiently retentive to enable him to remember the spot in which he deposited every acorn. The industrious little fellow, no doubt, loses a few every year; these few spring up, and are destined to supply the place of the parent tree. *Thus is Britain, in some measure, indebted to the industry and bad memory of a squirrel for her pride, her glory, and her very existence.*"

Those who fail to see in the above, a striking evidence of *design*, will, I fear, be considered wilfully blind. The simple creation of the squirrel, with its peculiar instincts and habits, was not sufficient to work out the destiny of England. Had the squirrel been made perfect—England would never have been! Had squirrels been created with retentive memories, our ships would never have been found in every port in every part of the world. Yes, to the bad memory of a squirrel do we owe not only our greatness but our very existence. For if there had been no *oaks* there could have been no *English*; and of course if there had been no English, there could not have been any English *pride!* This would have been the greatest misfortune of all, and how thankful should we be that we are preserved from it. If the writer means to infer that the "very existence" of Britain, as an island, was dependant upon the squirrel forgetting his acorn, and pinching his belly—why, all I can say is, that I cannot see the connexion *to that extent.—Ed. of L. R.*

According to the ideas of the Homeric and Hesiodic ages, it would seem that the *world* was a hallow globe, divided into two equal portions by the flat disk of the earth. The external shell of this globe is called by the poets *brazen* and *iron*, probably only to express its *soilidity*. The superior hemisphere was named *Heaven*, the inferior one *Tartaros*. The length of the diameter of the hollow sphere is given thus by Hesiod. It would take, he says, nine days for an anvil to fall from *heaven* to earth; an equal space of time would be occupied by its fall from earth to the bottom of *Tartaros*. The luminaries which gave light to gods and men shed their radiance through all the interior of the upper hemisphere; while that of the inferior one was filled with eternal gloom and darkness, and its still air unmoved by any wind. The earth occupied the centre of the world, in the form of a round flat disk, or rather cylinder, around which the river ocean flowed.

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